10/10: Design Day Booklet
Team Project Page Artwork Feedback

The Capstone Experience

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Department of Computer Science and Engineering
Michigan State University
Fall 2023
What do you need to do?

• An updated version of your Design Day booklet team page zipped folder with the artwork layout modifications is posted on our Downloads page. Get it. Unzip it.
• A PDF of this slide deck is posted on our Downloads page. Get it.
• Use the Design Day booklet team page Word template in this folder.
• Read the comments below about your team’s artwork.
• Leave the artwork layout basically as is.
• Redo your artwork if and as requested.
• If necessary…
  ▪ ...provide new high-resolution png originals appropriately numbered and named
  ▪ ...change pictures in your template to reflect any new artwork. Do so by right-clicking on the artwork and selecting “Change Picture > From a File...” to preserve the size and location.
• If necessary, place your new artwork in your project page team and in your team assets folder.
• If necessary, update your Word template and artwork files.
• Zip up your template assets folder using Windows zip.
• Upload your zipped assets folder to DD Assets Zip Files w Artwork Updates 1 in our Microsoft Teams General Channel file space and your team’s private file space by 11:59 p.m., Thursday, October 12.
Team Ally Artwork Feedback (Luke)
Original Artwork

Feedback

• Your artwork is fine.
• Thanks for coming to the Artwork Clinic.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Nice work! Thanks!
Our application is written in HTML, CSS, and JavaScript, and utilizes Amazon Web Services for infrastructure. It utilizes the React framework. The application interacts with specialized financial tools such as interest and loan calculators. With these coins, users can progress through levels. As users level up, they are recommended more difficult courses and unlock situations that can sometimes be complicated, as occasionally a customer is not well versed on a particular aspect of finance. With this in mind, we have designed the user interface to be intuitive and easy to use. The application provides a variety of courses that cover a wide range of topics, and these courses are tailored to each user's financial knowledge and interests. By using an algorithm that recommends courses based on a user's past performance and feedback, we ensure that each user is provided with content that is relevant to their needs and interests. Ally Financial is a leader in consumer and commercial financial services, and we are proud to be able to offer our customers a platform that is designed to help them improve their financial knowledge further.
Team Amazon Artwork Feedback (Griffin)
Original Artwork

Feedback

• Your artwork is fine.
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• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Nice work! Thanks!
Team Amazon Artwork Feedback (Griffin)

Original Artwork

Modified Artwork
• Your artwork and layout are basically good.
• Your artwork blended into the background. You had a border but it was too thin. I remember telling your during the Artwork Clinic to make the border thicker. I did it for you.
• I resized and moved things.
• Leave the artwork as it is now. Do not resize or move anything.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• If you needed to make any corrections as per my instructions or other updates, recreate your assets zip file, and submit the updated zip file by uploading it to the Teams folder “Design Day Booklet Zip File Round 2”.
• Good work!
Anthropocene Institute is an organization founded by Carl Page in 2012 and is focused on making Earth sustainable by knowing and investing in the right technology. They partner with entrepreneurs, investors, governments, non-profits, and universities to foster science, influence policy, promote sustainable, clean energy, and profits, and universities to foster science, influence policy, promote sustainable, clean energy, and profits.

As climate change has become more serious of an issue over time, it has become increasingly beneficial for companies and organizations to invest in lowering their carbon footprint. For example, one fourth of Fortune 500 companies have pledged to be carbon neutral by 2030. Investing in carbon removal technology is hard enough for the world’s biggest companies, but smaller private companies, entrepreneurs, investors, and the public to become informed and to help them make investment decisions.

React framework and utilizes Python machine learning libraries, publicly available data, and the Mapbox JavaScript API to generate heatmaps. Our Carbon Mapp is a website used by governmental agencies, public toons, responsive organizations to foster technology, and even as a carbon-negative building material.

Carbon Mapp displays fully interactive and responsive heatmaps for three major carbon capture technologies on their own or even as a carbon-negative building material. On each of those pages, users are greeted with a heatmap that displays how cost effective it is to implement the specific carbon removal technology for each state and county in the United States. There are also dropdown menus on each page that allow users to select other relevant metrics to overlay onto the heatmap like the number of trees that could be planted in each county.

There are also dropdown menus on each page that allow users to become informed and to help them make investment decisions.
Team Auto-Owners Artwork Feedback (Tommy)

Original Artwork

Feedback

• Your artwork is great.
• Your layout is basically good.
• I resized and moved things slightly.
• Leave the artwork as it is now. Do not resize or move anything.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
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• Nice work! Thanks!
The Help me see application utilizes the HoloLens 2 and in object detection mode, the application takes a picture and analyzes it to detect insured objects that a homeowner has in their own home. Once an object is selected, it appears in a holographic form in front of the user. It can be placed on any surface in a typical household. In overlay mode, policyholders select between objects such as refrigerators, toasters and fire extinguishers that are often found in one's home. Detected objects have the same information button seen in the overlay mode. The insurance information can then be displayed next to the object, the loss prevention and insurance information appear and moved around. When a user presses the information button on the holographic form in front of the user, the loss prevention and insurance implications and ways to prevent loss that come with them appear. Owners insurance policy insures many items in one's household. Policy holders may not be aware of the various insurance implications and ways to prevent loss that come with them. Auto Owners Insurance is a Fortune 500 company employing more than 4,700 associates to provide nearly 10 million insurance policies across 26 states. Founded in 1916, Auto Owners Insurance has been headquartered in Lansing, Michigan for over 100 years.
Team Bosch Artwork Feedback (Griffin)

Original Artwork

Feedback

- Your artwork is great.
- Your layout is basically good.
- I resized and moved things slightly.
- Leave the artwork as it is now. Do not resize or move anything.
- If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
- If there are more corrections other than to the project description, make them, and highlight in yellow.
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- Good work (except for not using the Windows version of Word)!
Bosch to further develop and create software to make trailering safer by continuously checking the connection during driving. This allows users to clearly determine if a trailer was connected correctly in a simple format and can be used whether the displayed frame shows a correct or failed connection. The dashboard also displays boxes surrounding each of the present hitching components. Components of a successful connection are present. All of the necessary components for a proper hitching are present. This application can be used by Bosch to clearly determine if a trailer has been properly hitched to the vehicle.

Many of the software products developed by Bosch are tailored to industrial products, and IoT software. Bosch, founded in 1886 by Robert Bosch in Stuttgart, Germany, is a leading global provider of technology. Bosch employs over 400,000 associates worldwide to produce automotive components, industrial products, and consumer goods.

Our Trailering Safety Tool combats this problem by providing a checklist of all necessary components for a proper hitching. Users can see a dashboard with boxes surrounding each present hitching component. Components are presented to the user in a simple application, with a tick indicating a successful connection, and whether all parts are present in the connection. This allows users a clear and simple way to check if their trailer has been properly hitched to the vehicle. Thus, a trailer must be continually checked if it is still connected correctly and that the trailer connection is maintained.

For consumers, there is a major need for safety solutions for trailering as well. If a trailer is not properly hitched to a vehicle, the trailer could detach while on the road, causing an accident. Thus, a trailer must be continually checked if it is still properly hitched to the vehicle. While many of these products are dedicated to safe driving. Many of the software products developed by Bosch are tailored to industrial products, and IoT software. Bosch, founded in 1886 by Robert Bosch in Stuttgart, Germany, is a leading global provider of technology. Bosch employs over 400,000 associates worldwide to produce automotive components, industrial products, and consumer goods.

Our Trailering Safety Tool utilizes Python for the front end, and the entire tool is containerized using Docker. For the back end, the machine learning model is developed using PyTorch, and the entire tool is containerized using Docker.
Team DRIVEN-4 Artwork Feedback (Tommy)
Original Artwork

Feedback

• Your artwork is good.
• Your layout is basically good.
• I resized and moved things slightly.
• Leave the artwork as it is now. Do not resize or move anything.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
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• Nice work!
For the front end, our application uses HTML, CSS, and JavaScript, while the back end is implemented with Flask, MySQL, and SQLAlchemy. An FTP server makes the connection between the MySQL databases and the IoT boards.

As DRIVEN-4 expands, they continue to develop their own IoT development (IoT), connected operations (IIoT), cloud services, and cybersecurity. Currently, DRIVEN leverages PTC's ThingWorx and Digi's Remote Manager for remote device management and monitoring.

Users within an organization manage their IoT devices over the internet and can download firmware for the devices, perform custom updates, and analyze data delivered to the cloud from the device.

Administrators of an organization can add or remove users, who can delete organizations, set payment due dates, and implement system level settings on devices. One level above the administrators are the super users, who can delete device data. One level above the super users are the specific super users, who can delete specific device data. Each level of user can securely manage and analyze their data through various graphs, data analytics, and visualization tools.

Driven Connect Application, Server, and Backend tool solves this issue with a streamlined web application that allows manufacturers to manage devices and analyze data delivered to the cloud from the device. As the company expands, they continue to develop their own IoT development (IoT), connected operations (IIoT), cloud services, and cybersecurity. Currently, DRIVEN leverages PTC's ThingWorx and Digi's Remote Manager for remote device management and monitoring.
Team Evolutio Artwork Feedback (Griffin)

Original Artwork Feedback

• Your artwork is fine.
• Thanks for coming to the Artwork Clinic.
• I resized and moved things slightly.
• Leave the artwork as it is now. Do not resize or move anything.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Nice work! Thanks!
Our Evo Observability Platform is a robust and scalable tool that allows a user to select an application and visualize its performance. Evolutio sees an opportunity to further improve existing observability software and add to cost alternatives for effective observability in monitoring an application's performance. Evolutio brings visibility, simplicity, and usability to a client's infrastructure, data, and processes on an increased level. By viewing a generated dependency map, a user can observe an application's internal flow of services on a deeper level. A user is notified of performance deviations through our alert notification system. The generated alerts can be sent through email, SMS, or a collaboration tool such as Slack.

Evolutio leverages four specialized practices: observability, security, data science & analytics, and automation. Engineering teams are looking to switch to more effective and cost-efficient tools for their complex enterprise platforms. They provide the necessary solutions through four specialized practices: observability, security, data science & analytics, and automation. Our Evo Observability Platform also provides the user with a log of application errors for quicker diagnosis of issues. A user can observe an application's behavior of each application through four specialized practices: observability, security, data science & analytics, and automation. Evolutio provides extensive visibility into the applications in real time and provides information and statistics about an application, such as its performance on a dashboard. The dashboard displays metric information for each application. As applications grow increasingly complex, it becomes more difficult. Our software is a web application built on ReactJS framework. The back end utilizes We use Kubernetes for containerization, Amazon Web Services for infrastructure hosting, and Harness for continuous integration and delivery. Our front end utilizes the ReactJS framework. The back end utilizes OpenTelemetry for data collection, Apache Kafka for data streaming, and Apache Druid as database.

A user is notified of performance deviations through our alert notification system. The generated alerts can be sent through email, SMS, or a collaboration tool such as Slack.

As applications grow increasingly complex, it becomes more difficult. Our software allows a user to select an application and visualize its performance. Evolutio sees an opportunity to further improve existing observability software and add to cost alternatives for effective observability in monitoring an application's performance. Evolutio brings visibility, simplicity, and usability to a client's infrastructure, data, and processes on an increased level. By viewing a generated dependency map, a user can observe an application's internal flow of services on a deeper level. A user is notified of performance deviations through our alert notification system. The generated alerts can be sent through email, SMS, or a collaboration tool such as Slack.
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Thanks for coming to the Artwork Clinic.

I resized and moved things slightly.

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If there are more corrections other than to the project description, make them, and highlight in yellow.

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Nicely done! Thanks!
Team GM Artwork Feedback (Luke)

Original Artwork

Modified Artwork

As one of the largest automakers, GM produces a lot of software. Our GM Application Lifecycle Framework 2.0 provides a better solution to be able to track requirements from requesters, validate that needs to be reviewed, deployed and managed. GM wants a better distribution through several forms which change in response to relevant engineers, update and track them during the engineering process, track them during the development process, and ensure compliance with GM's engineering standards.

Once submitted, the Framework caters to the specific scenario of the request and has a customized automated process for each use case. Requesters can submit inputs for a smoother user experience. Administrators can also view site logs to verify that the process is correct and to get always submitted. Administrators can also view site logs to verify that the process is correct and to get always submitted. Administrators can also view site logs to verify that the process is correct and to get always submitted. Administrators can also view site logs to verify that the process is correct and to get always submitted. Administrators can also view site logs to verify that the process is correct and to get always submitted.

Development of the Application Lifecycle Framework started last semester and the previous team did an excellent job beginning with our own development. We have completed the development. We have completed the development and delivered the top view of the workflow.

The system automates much of the validation of requests, ensuring correct information is always submitted. Administrators can also view site logs to verify that the process is correct and to get always submitted. Administrators can also view site logs to verify that the process is correct and to get always submitted. Administrators can also view site logs to verify that the process is correct and to get always submitted. Administrators can also view site logs to verify that the process is correct and to get always submitted.
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Nice work! Thanks!
Leveraging OpenAI for Business Analytics

The Capstone Experience

OpenAI. The application is containerized with Docker and hosted on Google Cloud.

information processing, and Python Flask, all of which interact with OpenAI. The application is containerized with Docker and hosted on Google Cloud.

leverages DynamoDB and S3 for data storage, LangChain for information processing, and Python Flask. The back end leverages DynamoDB and S3 for data storage, LangChain for information processing, and Python Flask.

ReactJS framework along with HTML and CSS. The back end

them continually adapt to meet customer needs.

In the rapidly changing digital landscape, HAP recognizes the power of artificial intelligence and the need to n

enhancing the well-being of communities they serve by offering quality healthcare plans and innovating to meet the ever-evolving needs of their customer base.

HAP is a leading not-for-profit health insurance provider headquartered in Detroit, Michigan. Since 1956, HAP has been offering innovative solutions to meet the needs of the evolving healthcare market. HAP recognizes the power of artificial intelligence and the need to navigate through the rapidly changing digital landscape.

By analyzing responses from a completed survey, this tool matches users to the health plan selection process. By analyzing responses from a completed survey, this tool matches users to the health plan selection process. It provides real-time data based on HAP.org content, making it easier for users to find the

Lastly, the call summarization tool takes detail call transcripts, enabling HAP to quickly understand the reason behind calls, helping to extract three key phrases, and determines a call subject. This

goals. The chatbot to enhance the user experience on HAP.org by

make information more accessible, refine health plan choices, and

advancements. They aim to improve their website's user experience, making it easier for users to navigate through multiple web pages.

Completed survey, this tool matches users to the health plan selection process. By analyzing responses from a completed survey, this tool matches users to the health plan selection process. It provides real-time data based on HAP.org content, making it easier for users to find the

quickly answering users' questions. It provides real-time data based on HAP.org content, making it easier for users to find the

design and innovation. This project is a testament to HAP's commitment to

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Team Kellanova Artwork Feedback (Luke)
Original Artwork

Feedback

• Your artwork is fine.
• Thanks for coming to the Artwork Clinic.
• Leave the artwork as it is now. Do not resize or move anything.
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• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Nice work! Thanks!
Kellanova is a leading company in global snacking, international based foods, and North American frozen foods, with iconic world-class brands. Launched in late 2023, Kellanova recognizes the challenges in customer returns processing at Kellogg Company over the previous 117 years as Kellogg Company.

Kellanova is building on the strong brand equity and legacy built through Microsoft, focusing on internal efficiency. This tool allows processors to submit OSD claim forms, view all submitted claims in an organized fashion, and fosters an environment where employees are equipped with the tools they need to succeed.

Kellanova recognizes the need to modernize these operations to enhance the customer experience and internal efficiency. Their current process relies on manual data entry via Excel for handling customer returns, automation and improve overall performance.

Team's Microsoft PowerApp connects to Amazon's Relational Database Service which hosts our SQL tables that contain the claims data. The PowerApp is an innovative tool that empowers internal employees and claims processors to report and track OSD incidents effectively, ensuring swift resolution and improved supply chain efficiency. This tool allows processors to submit OSD claim forms, view all submitted claims in an organized fashion, and improve overall performance.

Team's Microsoft PowerApp connects to Amazon's Relational Database Service which hosts our SQL tables that contain the claims data. The PowerApp is an innovative tool that empowers internal employees and claims processors to report and track OSD incidents effectively, ensuring swift resolution and improved supply chain efficiency. This tool allows processors to submit OSD claim forms, view all submitted claims in an organized fashion, and improve overall performance.
Team Kohl’s Artwork Feedback (Luke)
Original Artwork

Feedback

• Your artwork is good.
• Your layout is basically good.
• I resized and moved things slightly.
• Leave the artwork as it is now. Do not resize or move anything.
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• Nice work!
Team Kohl’s Artwork Feedback (Luke)
Original Artwork

Modified Artwork
Team Lockheed Martin Space Artwork Feedback (Tommy)

Original Artwork

Feedback

• Your artwork is not good.
• Your artwork does not show anything from any software that you’ve written. Do you really not have any UI that you can show? Check out the DD page from last semester.
• Redo your and add screenshots of working software. One photo of your board will be plenty. Show working software.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• Make the corrections as per my instructions or other updates, recreate your assets zip file, and submit the updated zip file by uploading it to the Teams folder “Design Day Booklet Zip File Round 2”.

The Capstone Experience
Team Lockheed Martin Space Artwork Feedback (Tommy)

Original Artwork

Artwork needs to be redone.
Dr. D. didn’t edit it at all

Modified Artwork
Team Magna Artwork Feedback (Tommy)

Original Artwork

Feedback

• Your artwork is great.
• Your layout is basically good.
• I resized and moved things slightly.
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• Nice work!
The Capstone Experience

Our application uses CesiumJS for displaying the plant. It employs NodeJS to make saving and loading API calls to MongoDB.

Customization is a core feature, allowing floor managers to tune the floor plan for maximum efficiency, our platform provides a precise 3D representation of the entire manufacturing plant, with every machine and storage unit accurately placed. Whether relocating machines or critical data such as operational status and storage capacity, they can instantly retrieve the entire factory layout seamlessly. By monitoring inventory levels, and accessing real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly.

Floor managers can access real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly.


Introducing our Composable 3D Model for Manufacturing

Our platform provides a precise 3D representation of the entire manufacturing plant, with every machine and storage unit accurately placed. Whether relocating machines or critical data such as operational status and storage capacity, they can instantly retrieve the entire factory layout seamlessly. By monitoring inventory levels, and accessing real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly.

Team Members

Josiah Klann
West Bloomfield, Michigan

Viktor Filipovich
Novi, Michigan

Sidharth Amarnath
Grand Rapids, Michigan

Ben Zuke
Washington Township, Michigan

Alex Grundy

Team Members

Sundar Selvaraj
Troy, Michigan

Raidu Rayasam
Boston, Massachusetts

Pranay Jain

Team Members

Sponsors

Magna International, founded in 1957 as a small tool and die shop, has evolved into a global automotive technology and manufacturing powerhouse. It is a key player in the automotive industry, supplying components and systems to major vehicle manufacturers worldwide and shaping the future of mobility.

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Our platform provides a precise 3D representation of the entire manufacturing plant, with every machine and storage unit accurately placed. Whether relocating machines or critical data such as operational status and storage capacity, they can instantly retrieve the entire factory layout seamlessly. By monitoring inventory levels, and accessing real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly.

Introducing our Composable 3D Model for Manufacturing

Our platform provides a precise 3D representation of the entire manufacturing plant, with every machine and storage unit accurately placed. Whether relocating machines or critical data such as operational status and storage capacity, they can instantly retrieve the entire factory layout seamlessly. By monitoring inventory levels, and accessing real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly. By gaining real-time insights effortlessly.
Team Meijer Artwork Feedback (Tommy)

Original Artwork

Feedback

• Your artwork is good.
• Your layout is basically good.
• I resized and moved things slightly.
• Leave the artwork as it is now. Do not resize or move anything.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• If you needed to make any corrections as per my instructions or other updates, recreate your assets zip file, and submit the updated zip file by uploading it to the Teams folder “Design Day Booklet Zip File Round 2”.

The Capstone Experience

Design Day Booklet Artwork Feedback
Enhanced Shopping Experience Using AI

Meijer

Our software leverages the powerful GPT-4 from OpenAI. All our software is hosted on Azure, a leading cloud platform.

For recipe generation, our retrieval are achieved through Azure SQL, our chosen database.

Next.js, offering a smooth user interface. Data integrity and swift robust technologies. The front end of our system is designed using screen to the dining table.

pickup. This synergy ensures a hassle organized and prepared for either prompt delivery or in wit

between selecting a recipe and acquiring the ingredients. Users can paramount. Un

ingredient selections based on client purchase history.

破晓的餐点，素食和过敏

的早餐到美味的晚餐。认识的多元口味

用户现在可以生成大量的食谱，从振奋人心的

选择完美的膳食从来没有这么简单。更难的是

顾客。

Shopping Experience Using AI tool available to all Meijer mPerks

customer experience. To furth

er chain

ces. The customer the enhanced mPerks
growing software, forward, gorating taste choices, customized.

ience is the bridge users can be click, closelyusfully in-store from the

icked by and swiftl database powerful leading

Team Meijer Artwork Feedback (Tommy)

Original Artwork

Modified Artwork
• Your artwork is fine.
• Thanks for coming to the Artwork Clinic.
• I resized and moved things slightly.
• Leave the artwork as it is now. Do not resize or move anything.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Nice work! Thanks!
Paradigm to create UML diagrams in their classes. clUML removes the department's dependency on third-party software with an internally developed program, allowing for a consistent and familiar approach to creating UML diagrams that allow students to quickly learn how to use the tools available to them effectively.

Our software runs on all modern internet browsers, utilizing many JavaScript packages, such as DOMPurify for sanitizing user input and Jasmine and Karma for testing. Students currently utilize a third-party program named Visual Paradigm to create UML diagrams, which are models that represent the structure of a system.

Our software's interface is similar to Cirsim, an existing party software with an original design. The diagram connected to our software is a collection of components that are related to each other and must be designed in a way that maintains structural integrity. A sanity check function alerts the user to mistakes made in the diagram, listing the type and location of each error. Unintentional changes revert quickly with saved previous states.

Students use the tools available in our software applications developed in Node.js/JavaScript, HTML, and SASS/CSS. Our software employs the diaState to other programmers using UML diagrams. Developing the software structure and easily communicate that is the creation and usage of UML diagrams, which is one of the skills that all computer science students must learn.

The Department of Computer Science and Engineering at Michigan State University provides well-renowned courses for over 2,000 students in related fields. These courses are taught in-house, as well as through a non-profit party program named Visual Paradigm. The Capstone Experience at Michigan State University CSE Artwork Feedback (Tommy)
Your artwork is fine.
Thanks for coming to the Artwork Clinic.
I resized and moved things slightly.
Leave the artwork as it is now. Do not resize or move anything.
If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
If there are more corrections other than to the project description, make them, and highlight in yellow.
If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
Nice work! Thanks!
Small Object Detection Using CCTV Cameras

Moii

model and

gun detection, is

hosted on Google Cloud Platform. A FastAPI interfaces with this

model and coordinates with Firebase to relay predictions.

The web application centralizes the management of CCTV

cameras and provides clients with a platform to monitor a

selected range of objects of interest. Building on their established

system features a ReactJS

time video feed analysis and

alerts.

Our solution prioritizes safety and security by

detecting a

marked video snippet, highlighting the gun with a bounding box,

potential threats. When a firearm is detected, the system generates

alerts.

Additionally, the web application includes a testing

platform for clients to explore the capabilities of the small object

detection model without facing an actual threat.

The system includes a web application and a small object detection model

trained on a curated dataset. To access the model's capabilities,

clients input their CCTV camera details on the web application.

Small Object Detection

AI is a multinational MSU

born startup founded in 2019 in

Canton, Michigan and Chennai, India. Moii leverages state

of the art artificial intelligence technologies to provide actionable analytics

Troy, Michigan and Ahmedabad, Gujarat, India.

Khushi Vora

Canton, Michigan

Nathan Srivastava

Hong Zhuang

Ahmedabad, Gujarat, India

Canton, Michigan

Sam Valdovinos Granados

Troy, Michigan

Deepak Upadya

Bangalore, India

Kunal Sahu

Troy, Michigan

Madhu Posani

Ingolstadt, Bavaria, Germany

Lakshman Balasubramaniam

Wenzhou, Zhejiang, China

Lakshman Balasubramaniam

Project Sponsors

Moii
Team MSUFCU Artwork Feedback (Tommy)

Original Artwork

Feedback

• Your artwork is fine.
• Thanks for coming to the Artwork Clinic.
• I resized and moved things slightly.
• Leave the artwork as it is now. Do not resize or move anything.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Nice work! Thanks!
Digital Banking Car App

MSU Federal Credit Union

The Capstone Experience

hosted on the MSU CSE arctic server.

The backend uses a PHP framework that communicates with a SQL database that is hosted on the MSU CSE arctic server.

The software enhances the member experience by delivering a seamless and secure means to perform financial transactions within their vehicle.

MSUFCU’s offers members a seamless and secure means to perform financial transactions within their vehicle.

The application gives users the ability to perform actions within their vehicle safely, intuitively, and quickly perform actions that can be done on mobile electronic devices while operating a vehicle.

The front end of our Android application is written in Kotlin.

Due to legislative changes enacted by Michigan, the use of mobile devices while driving is illegal. The MSUFCU’s offers members a seamless and secure means to perform financial transactions within their vehicle safely, intuitively, and quickly perform actions that can be done on mobile electronic devices while operating a vehicle.

The application gives users the ability to perform actions within their vehicle safely, intuitively, and quickly perform actions that can be done on mobile electronic devices while operating a vehicle.

MSUFCU’s offers members a seamless and secure means to perform financial transactions within their vehicle.

Digital Banking Car App is an innovative extension of MSUFCU’s mobile application that is designed to enhance the member experience by providing a seamless and secure means to perform financial transactions within their vehicle.

The application serves as an extension of the MSUFCU’s mobile application, allowing members to access and utilize financial services and resources while in the comfort of their own vehicle.

The roaming of a student, faculty member, or alumni with a student, faculty member, or alumni background can undertake a multitude of financial transactions. Ranging from checking transactions to transferring funds to other members, the Capstone Experience provides a seamless and secure means for members to access and utilize financial services and resources.

Through voice assistants, members can transfer funds, view recent transactions, and locate nearby banks. The application also enables the transfer of funds to other members through their internal Member2Member system, all accessible within the mobile application.

The MSUFCU mobile application is designed to be used within the vehicle and is accessible through voice assistants. It offers members the ability to perform various financial transactions while on the go, such as transferring funds, viewing recent transactions, and locating nearby banks.

The application is designed to be intuitive and user-friendly, allowing members to easily access and utilize financial services and resources while on the go. It is a seamless and secure means for members to perform financial transactions within their vehicle.

The application is designed to be used within the vehicle and is accessible through voice assistants. It offers members the ability to perform various financial transactions while on the go, such as transferring funds, viewing recent transactions, and locating nearby banks. The application is designed to be intuitive and user-friendly, allowing members to easily access and utilize financial services and resources while on the go.

The application is designed to be used within the vehicle and is accessible through voice assistants. It offers members the ability to perform various financial transactions while on the go, such as transferring funds, viewing recent transactions, and locating nearby banks. The application is designed to be intuitive and user-friendly, allowing members to easily access and utilize financial services and resources while on the go.

The application is designed to be used within the vehicle and is accessible through voice assistants. It offers members the ability to perform various financial transactions while on the go, such as transferring funds, viewing recent transactions, and locating nearby banks. The application is designed to be intuitive and user-friendly, allowing members to easily access and utilize financial services and resources while on the go.
Team Roosevelt Innovations Data Science Artwork Feedback (Tommy)

Original Artwork

Feedback

- Your artwork is not good.
- Your upper artwork needs a frame. Is it a web app? If so, capture it with a browser from.
- You lower frame is nothing more than a splash screen. What did we say about splash screens. Replace this with a capture of something more significant and interesting.
- Your assets folder included the png files of the placeholder artwork. When you resubmit it, include high resolution versions of the artwork pngs not the placeholders.
- If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
- If there are more corrections other than to the project description, make them, and highlight in yellow.
- If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
- Redo your artwork as per my instructions above, recreate your assets zip file, and submit the updated zip file by uploading it to the Teams folder “Design Day Booklet Zip File Round 2“.
Predictive Claims Scoring

Roosevelt Innovations

interact with the Snowflake database. The dashboard is built in Tableau. The machine learning models are built using python.

Artwork needs to be redone.

Dr. D. didn’t edit it at all
• Your artwork is good, although rather full of white space.
• IMHO, your artwork needed a slightly thicker border so I added it for you. It won’t cost you anything.
• Your layout is basically good.
• I resized and moved things slightly.
• Leave the artwork as it is now. Do not resize or move anything.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• If you needed to make any corrections as per my instructions or other updates, recreate your assets zip file, and submit the updated zip file by uploading it to the Teams folder “Design Day Booklet Zip File Round 2”.

• Good work!
Our Universal Guided Web Editor, developed by Roosevelt Innovations, allows insurance experts to create business rules in a streamlined and easy-to-use interface. This guided tool, empowering businesses to create rules guided selectable options, this allows any individual to have a positive outcome. Users first select from which rule framework they wish to implement a rule. The framework is then interpreted into a layout process. Users input their rule specifications and the system consumes for users without the involvement of technical team members. Another benefit to using the Universal Guided Web Editor is its responsive design, which improves quality and reduces errors in a work environment. Without the involvement of technical team members, Roosevelt Innovations has enabled businesses to edit business rules that govern the automated claims processing system. However, development can be time-consuming for users without a technical background who require additional training.

Roosevelt Innovations is a software solutions company owned by Delta Dental headquartered in Okemos, Michigan. With over 50 years of experience and innovative automated claims processing capabilities, Roosevelt has achieved an industry-leading 96% adjacent rate and enabled a total treatment cost savings of $972 million. Altogether, Roosevelt has over 23 million users across its platforms and offers their services to insurance companies across the country.

At Roosevelt Innovations, insurance experts need to create and processing or users training. Our application's front end is constructed with Angular, a web framework for building dynamic web applications. ANTLR4, a powerful parser generator that produces parsers for processing structured text, using a visitor approach to traverse the generated abstract syntax tree.
Team RPM Artwork Feedback (Luke)

Original Artwork

Feedback

• Your artwork is not good.
• The entire left half of your web app artwork is blank. I hacked it by cropping it and by stretching it. (You can’t just do this.) Redo it and recapture it including more text to fill the screen vertically.
• Your software is supposed to be AI-based. Your mobile app example is a text dump of an answer to a simple question.
• Replace ALL of your chats with examples that demonstrate AI, namely shows that your software can chat like a human. The examples you show are trivial and do not require AI. And the examples should be “longer” chats.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• If you needed to make any corrections as per my instructions or other updates, recreate your assets zip file, and submit the updated zip file by uploading it to the Teams folder “Design Day Booklet Zip File Round 2”.

RPM is an international logistics and supply chain solutions company based in Royal Oak, Michigan. It specializes and offers services in freight transportation and vehicle logistics across North America and Europe. RPM services 30 countries and transports over 60 thousand vehicles per month.

Serving as an end-to-end transportation provider requires a considerable amount of effort to manage drivers’ and customers’ inquiries. To address the needs of the drivers and customers, RPM requires 24/7 on-call representatives. This leads to high operational costs and potential gaps in customer service quality. Therefore, RPM wants to maximize the utility of the carrier representatives while reducing costs and enhancing the drivers’ level of satisfaction.

Our AI-based chat service mimics a customer service representative by instantly answering carrier inquiries. The AI chat service has access to a multitude of frequently asked questions as well as instant access to all of RPM’s shipment data. Its artificial intelligence is incredibly powerful, which allows it to have strong question comprehension and dynamic answers. The chat maintains a natural human language interaction, such that the driver feels as if they are talking to a real human. When the chat reaches a point that a carrier representative is needed, it seamlessly transfers a user to an on-call representative. Transferring the users' chat transcript to the representative improves the speed and quality of the customer service experience.

Our AI-based chat is a back-end service that can be integrated into any platform. Our service utilizes Python Flask as well as OpenAI, Turvo and Microsoft .NET. The chat service is hosted entirely on Python Flask. OpenAI’s API is used for natural language processing while Turvo’s API is used to pull data from RPM’s .NET database.
AI RPM database. OpenAI’s API is used for natural language processing while Turvo’s API is used to pull data from RPM’s .NET database. Our AI service has access to a multitude of frequently asked questions as well as instant access to all of RPM’s shipment data. Its artificial intelligence is incredibly powerful, which allows it to have strong question comprehension and dynamic answers.

When the chat reaches a point that a carrier representative is needed, it seamlessly transfers a user to an on-demand service. This leads to high operational efficiency, reducing costs and potential gaps in customer service quality. Therefore, RPM wants to maximize the utility of the carrier representatives while reducing costs and enhancing the drivers’ level of satisfaction.

Serving as an end transportation provider, RPM offers a full suite of transport solutions to carriers and logistics providers. RPM primarily specializes in finished vehicle and freight shipping across North America and Europe. In addition to those, RPM also offers Food & Beverage, Consumer Products, Major Manufacturing, Energy/Oil/Gas, and Robotics shipping. RPM also works with clients to meet their specific shipping and transportation needs.

RPM is an international logistics and supply chain solutions company based in Royal Oak, Michigan. It specializes and offers services in freight transportation and vehicle logistics across North America and Europe. RPM services 30 countries and transports over 60 thousand vehicles per month.
Your artwork is fine.
Thanks for coming to the Artwork Clinic.
I resized and moved things slightly.
Leave the artwork as it is now. Do not resize or move anything.
If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
If there are more corrections other than to the project description, make them, and highlight in yellow.
If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
Nice work! Thanks!
Stryker is a Fortune 500 company that provides world class medical equipment to hospitals worldwide. From surgical and neurotechnology, Stryker works in over 75 countries and impacts more than 130 million patients annually. Due to its size, Stryker faces the intricate challenge of overseeing a vast supply chain. As a serial acquisition company, Stryker frequently integrates new systems to manage products, purchase orders, and employees. This requires a centralized system that makes data integration seamless.

For Stryker, our application utilizes scheduled email alerts to help users receive data that needs to be monitored at regular intervals. These alerts are customizable, and users select preset reports or customize their own queries. Our EDI Transaction Monitoring Dashboard provides a web UI for searching, viewing, and downloading transaction data. JQuery's DataTables is utilized to display tabular information, and PowerBI is used to display dynamic graphs.

Our system also provides holistic analysis of all transactions, highlighting key trends and metrics. Users filter and customize these reports to provide analytics necessary for their projects. Our application utilizes a Flask back end hosted on Azure App Service, which serves users HTML, CSS and JavaScript. Data for each transaction is stored in Azure SQL Server. When a user opens the dashboard, they are shown a table aggregated and viewable as a pop up to visually show the status of each hop between systems. Raw payload data is available for traversing and scrutinizing.

Our EDI Transaction Monitoring Dashboard displays and analyzes transaction data to enhance decision making. It integrates and exporting capabilities to allow users to traverse the entire history of each transaction. Sorting, searching, viewing, and downloading is possible for each hop.
Feedback

• Your artwork is fine.
• Thanks for coming to the Artwork Clinic.
• I resized and moved things slightly.
• Leave the artwork as it is now. Do not resize or move anything.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Nice work! Thanks!
Our web application, hosted on Microsoft Azure, leverages OpenAI's large language model GPT-3.5 to interpret user intent while directing FFmpeg to implement the exact media edits. By eliminating the inherent complexities and challenges of video editing, TechSmith's ACE: Automated Content Editor, our web application, allows users to create and manage multiple editing projects, all tied to their accounts and stored in the cloud. Upon initializing a new project, users can choose the media they want to edit and preview alterations in real time through the editing view. ACE: Automated Content Editor, our web application, simplifies video editing by enabling users to edit videos using conversational language. Its powerful conversational assistant interprets user intent, and editors continue to chat with the user to achieve their desired outcomes. Corresponding editing actions, and continues to chat with the user through which all editing tasks are delegated. Users simply express their desired editing needs to the AI assistant, which interprets their intent and helps them translate their vision into a great video.

Unlike traditional video editors, ACE features a chat panel through which all editing tasks are delegated. A conversational and innovative expression of content and information delivery, we enable users to center their attention on the creative and transfer, the intricacy and steep learning curve behind video. Videos have become the quintessential medium for knowledge creation often pose a barrier for content creators to translate their vision into a great video. TechSmith continuously innovates to pave the way for users to seamlessly share knowledge and create content and information visually. Its powerful conversational assistant interprets user intent, and editors continue to chat with the user to achieve their desired outcomes. Corresponding editing actions, and continues to chat with the user through which all editing tasks are delegated. Users simply express their desired editing needs to the AI assistant, which interprets their intent and helps them translate their vision into a great video.

Solutions for creating videos with unparalleled ease and precision. TechSmith is the global leader in media recording and editing, we enable users to center their attention on the creative and transfer, the intricacy and steep learning curve behind video. Videos have become the quintessential medium for knowledge creation often pose a barrier for content creators to translate their vision into a great video. TechSmith continuously innovates to pave the way for users to seamlessly share knowledge and create content and information visually. Its powerful conversational assistant interprets user intent, and editors continue to chat with the user to achieve their desired outcomes. Corresponding editing actions, and continues to chat with the user through which all editing tasks are delegated. Users simply express their desired editing needs to the AI assistant, which interprets their intent and helps them translate their vision into a great video.
Team Union Pacific Artwork Feedback (Luke)

Original Artwork

Feedback

- Your artwork is fine.
- Thanks for coming to the Artwork Clinic.
- Leave the artwork as it is now. Do not resize or move anything.
- If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
- If there are more corrections other than to the project description, make them, and highlight in yellow.
- If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
- Nice work! Thanks!
Railroad Switch Alignment Training

Union Pacific

The Capstone Experience

relevant data from a database to generate a course in real-time. The software is configured using a JSON file and pulls video files and relevant data follows the SCORM standard for eLearning courses. The software is developed in Unity3D and programmed with C#. It follows the SCORM standard for eLearning courses. The software is also highly configurable, allowing management to build custom courses without having to write a line of code. The training software teaches personnel to better identify rail switches in a real-world setting. Each course of the training is its own program, giving management more control over exactly what train employees to identify the alignment of railroad switches quickly and accurately. It also allows for many training courses that train employees to identify the alignment of railroad switches quickly and accurately. It also allows for many training courses that lead to delays and damages and can pose a danger to personnel. A misaligned switch is crucial to ensuring the transportation of resources the country relies on. A misaligned switch can pose a danger to personnel.

Switches are a core component of railroads that direct the flow of trains. Correctly identifying switch alignment is necessary to prevent the derailment of trains. Our Railroad Switch Alignment Training software consists of sessions in a completely safe environment. Each training session is unique and requires employees to respond correctly. The response is correct and identifies the switch alignment. Upon inputting an eligible response, the software displays inputs corresponding to eligible actions related to switch identification. Upon inputting an eligible response, the software displays inputs corresponding to eligible actions related to switch identification. Upon inputting an eligible response, the software displays inputs corresponding to eligible actions related to switch identification. Upon inputting an eligible response, the software displays inputs corresponding to eligible actions related to switch identification.

Union Pacific has been building America for more than 160 years. Founded July 1st, 1862, they are one of the largest railroad companies in the United States. With over 32,500 miles of track in 23 western states, Union Pacific boasts an impressive lineup of over 8,000 locomotives, and a team of over 30,000 individuals.

Team Members

- Joseph Potila
- Farhan Parekh
- Ethan Potvin
- Laura Greet
- Elia Spyratos
- Brian Partlow
- Jeff Girbach
- Prasanna Rajendran
- Brian Partlow
- Jeff Girbach
- Prasanna Rajendran

Project Sponsors

Michigan State University

Original Artwork

Team Union Pacific Artwork Feedback (Luke)

Modified Artwork
• Your artwork needs work.
• Both of your screen captures include a ton of “white” space on both sides. I hacked them by cropping the images and adding a border. (You can’t just do that).
• Redo your two original screen captures eliminating the white space on the sides. Create a third one as well. (I duplicated one of your artworks just to illustrate the layout.)
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Make the changes as per my instructions and any other corrections, recreate your assets zip file, and submit the updated zip file by uploading it to the Teams folder “Design Day Booklet Zip File Round 2”.
United Airlines is one of America's foremost airlines, connecting millions of passengers annually, utilizing a substantial fleet of more than 850 aircraft. United Airlines strives to hold themselves in the highest standards of safety and reliability for its passengers.

To maintain their regulatory compliance, United Airlines has established a network of vendors that provide essential goods and services. This network includes passenger facilities, in-flight catering, remote and technical services, and in-flight entertainment. To ensure that the vendor manuals are in compliance with the provided regulations, the United Airlines' auditor will check the vendor manuals for each project. The system then compares the documents to ensure adherence to industry best practices. The current auditing process demands a substantial amount of labor hours expended, incurring significant financial expenditures for the company. The system allows auditors to view past audits along with their associated vendor manuals.

The website saves a completed audit and this is accessible to the auditors through the history page of the website, allowing auditors to view past audits along with their associated vendor manuals. The website also provides access to vendor manuals.

The application streamlines this process for auditors, not only by economizing on labor hours and financial resources expended but also by diminishing the disparities in auditing practices through the utilization of AI. The Audit Automation Tool automatically scans uploaded vendor manuals against the vendor's provided regulations. The system then compares the documents to ensure adherence to industry best practices.

The current auditing process requires auditors from United Airlines to review vendor manuals to ensure that the vendor manuals are in compliance with the provided regulations. The system then compares the documents to ensure adherence to industry best practices. The current auditing process demands a substantial amount of labor hours expended, incurring significant financial expenditures for the company. The system allows auditors to view past audits along with their associated vendor manuals. The website saves a completed audit and this is accessible to the auditors through the history page of the website, allowing auditors to view past audits along with their associated vendor manuals. The website also provides access to vendor manuals.

The application's user interface is constructed using React and Node, utilizing the ASP.NET framework and interacting with the backend model developed in Python. Communication occurs via an ASP.NET API while the data is stored on a DynamoDB database. The frontend and backend, along with the database, are all hosted on Amazon Web Services.

The Capstone Experience
Team Urban Science Artwork Feedback (Griffin)
Original Artwork Feedback

• Your artwork is fine.
• Thanks for coming to the Artwork Clinic.
• Leave the artwork as it is now. Do not resize or move anything.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Nice work! Thanks!
The front end of our user dashboard is written in HTML, CSS, Chart.js, and Angular.js. The backend is built with FastAPI and Firebase Firestore database in Python. Users gain insight to improve performance, opportunities, and support field staff and dealers. The extension can be integrated in client data dashboard, ensuring that all users are able to access comprehensive explanations and feedback. Users can access to visual explanations of the specific analysis that user picks. Due to the increasing intricacy of data from the industry, clients encountered challenges in comprehending the analysis. In the past, Urban Science hired firms to generate content for clients to obtain better understandings, however, this came at a high cost. The advancement in technology steers AI models to produce ultra-realistic virtual avatars that mimic human speech. Urban Science is a leading global data-driven consulting firm that specializes in providing insights and solutions for the automotive industry. With a track record of serving major automakers worldwide, they utilize data science and business science to address market challenges and drive success for their clients.
• Your artwork needs work.
• Your artwork is missing frames. Is your front end a web interface? If so, recapture the images and include a browser frame.
• If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
• If there are more corrections other than to the project description, make them, and highlight in yellow.
• If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
• Make corrections as per my instructions, recreate your assets zip file, and submit the updated zip file by uploading it to the Teams folder “Design Day Booklet Zip File Round 2”.

The Capstone Experience
Design Day Booklet Artwork Feedback
Team UWM Artwork Feedback (Griffin)
Original Artwork

Modified Artwork

Artwork needs to be redone.
Dr. D. didn’t edit it at all
Team Vectra Artwork Feedback (Luke)

Original Artwork

Feedback

- You submitted the placeholder png files rather than png files of your artwork. Resubmit your assets zip file with the png files of the artwork.
- Your artwork is good.
- Your layout is basically good.
- I resized and moved things slightly.
- Leave the artwork as it is now. Do not resize or move anything.
- If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
- If there are more corrections other than to the project description, make them, and highlight in yellow.
- If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
- If you needed to make any corrections as per my instructions or other updates, recreate your assets zip file, and submit the updated zip file by uploading it to the Teams folder “Design Day Booklet Zip File Round 2”.
The simulation data our application generates is used to train AI threat detection models used in the software that Vectra AI sells to its clients, increasing the effectiveness of Vectra AI’s security service. Vectra AI’s service is expected to rise to $256 billion by 2031. This makes security increasingly crucial and the effectiveness of their threat detection and real-time response across all domains of enterprise systems. With over a decade of experience, Vectra AI is a leader in the cybersecurity field, harnessing the power of artificial intelligence (AI) to provide security for enterprises in 113 countries. Along with the CRN Security 100 Excellence Awards, Vectra AI can be found on the Forbes AI 50 List of the World’s Most Innovative Companies for five years running, and the Microsoft 50 List of the Most Influential Companies in the Cloud. In 2021, an increasing number of their clients have utilized their service to prevent attacks and protect their command & control channels.

Malware Command and Control Channel Simulator

Our command & control simulator generates configurable C2 behavior. This enables Vectra AI to generate network events, which allows users to mimic diverse threat activity, increasing the effectiveness of Vectra AI’s security services.

Our server is hosted on Amazon EC2 and our entire application set is written in Python. Our server communication with the client is achieved over multiple protocols (TCP, UDP, HTTP, HTTPS).
Team Volkswagen Artwork Feedback (Luke)

Original Artwork

Feedback

- Your artwork looks great except it was way too small.
- Your layout is basically good.
- I resized and moved things slightly.
- Leave the artwork as it is now. Do not resize or move anything.
- If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
- If there are more corrections other than to the project description, make them, and highlight in yellow.
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Volkswagen Shopping App with Augmented Reality

Volkswagen Group of America

Our innovative approach to window shopping streamlines the buying process for our customers. It empowers them to make convenient and informed decisions on the go.

Current technology offers customers the comfort of visiting dealerships to view any vehicles they might purchase. However, this process is inconvenient, requiring potential customers physically visit multiple dealerships to view the cars they are interested in. Our software detects and displays a high-quality 3D model of the car, allowing users to experience the car from the comfort of their own home.

Once a location and orientation is selected, the car can be saved to be viewed and edited later. Users can also view the car's virtual interior. While imagining themselves behind the wheel, they can tap to honk the horn or pan around the car while imagining the vast selection of exterior body paints and accessories. These customizations can be saved to be viewed and edited later.

Our application displays a high-quality 3D model. It is developed in Swift using Xcode and leverages ARKit, RealityKit and SceneKit for AR. Our system uses API calls to AWS for database communication.

Our Volkswagen Shopping App with Augmented Reality allows VW customers to make convenient and informed decisions on their newest Volkswagen vehicle.

VW is also at the forefront of sustainable transportation. This application is the latest model in our commitment to providing customers with innovative technology and eco-friendly options. We look forward to continuing our development in this area and providing customers with a high-quality shopping experience.
Your artwork is fine.

Thanks for coming to the Artwork Clinic.

Leave the artwork as it is now. Do not resize or move anything.

If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.

If there are more corrections other than to the project description, make them, and highlight in yellow.

If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.

Nice work! Thanks!
Our Global Business Services Process Intelligence website is currently used. After spinning off as the leading manufacturer of cereals in the world, WK Kellogg Co. is charted to achieve aggressive margin improvements by migrating away from the current software that is being discontinued.

The data is stored in an SQL Database and Flask used in Python connects the Front-End and Back-End smoothly.

The website is the current data integration software that is being discontinued.

Our website connects the systems together and offers a smooth flow of data. Employees can compare live data and customize it according to their needs.

Our Global Business Services Process Intelligence website is supporting WK Kellogg Co. in this transition period by replacing the current software that is being discontinued.

Our website also offers the option of charting data by simply clicking on the specified row in the table, providing a wider change in the data.
Team Whirlpool Artwork Feedback (Tommy)

Original Artwork

Feedback

- Your artwork is fine.
- Thanks for coming to the Artwork Clinic.
- Leave the artwork as it is now. Do not resize or move anything.
- If you made any corrections in your original submission other than the project description (like to sponsor names), check that I corrected them. If I did not make the corrections, you should correct them again and highlight your corrections in yellow.
- If there are more corrections other than to the project description, make them, and highlight in yellow.
- If you did not need to make any corrections or updates, you do not need to submit anything. In fact, do NOT submit anything.
- Nice work! Thanks!
DeepOven: Volume and Quantity Estimation in Cooking

Whirlpool Corporation

Our DeepOven software detects the rack level, food quantity, and food volume as a proof of concept for the Whirlpool developing a smart oven. Users can see a livestream view of food cooking through their phone app, equipped with food identification and doneness detection technology. Our DeepOven software is in constant pursuit of improving life at home through their reliable appliances. The Fortune 500 company, headquartered in Benton Harbor, Michigan, is the world's leading home appliance company with over 50 manufacturing and research centers. The Capstone Experience

Team Members

Michigan State University

Project

Sponsors

The Capstone Experience