

MICHIGAN STATE

U N I V E R S I T Y

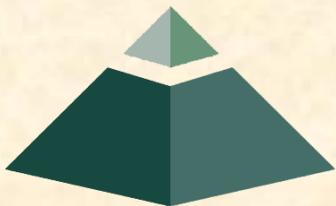
08/31: Capstone Overview

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University

Fall 2016



*From Students...
...to Professionals*

Capstone Overview

➤ Course Logistics

- Client Projects
- Course Logistics (Continued)



CSE 498, Collaborative Design

- “The Capstone Experience”
- Instructors
 - Dr. Wayne Dyksen (“Dr. D.”)
 - Spencer Ottarson
- Class Meetings
MW, 3:00-4:20pm, 1145 EB
- Syllabus
- Web Site
 - capstone.cse.msu.edu
 - Check it often.
- Email



Course Goals

[1 of 3]

- Give You Experience In
 - Real World
 - Corporate Setting
- Start Your Transition
 - From Student...
 - ...To Professional



Course Goals

[2 of 3]

- Teams of Students
- Build Significant Software System
 - Design
 - Develop
 - Debug
 - Document
 - Deliver
- For Corporate Clients
- In 15 (Short) Weeks



Course Goals

[3 of 3]

- Build a Significant Software System
- Work in a Team Environment
- Learn New Tools and Environments
- Build and Administer Systems
- Develop Your Communication Skills
- Develop Interview Talking Points
- Learn to Do Stuff on Your Own
- Etc...



Project Deliverables

- Project Plan Document & Presentation
- Alpha Presentation
- Beta Presentation
- Project Software & Documentation
- Project Video
- Design Day

See [Major Milestones](#).

All-Hands Meetings

Presentations By

- Dr. D.
- Spencer
- Teams
 - Status Reports
 - Formal Presentations
 - Project Plan
 - Alpha
 - Beta
 - Project Videos
- Guest Speaker(s)



All-Hands Meeting Agendas

- 08/31: Capstone Overview
- 09/05: (Labor Day, No Meeting)
- 09/07: Project Plan
- 09/12: Risks and Prototypes
- 09/14: Status Report Presentations
- 09/19: Team Project Plan Presentations
- 09/21: Team Project Plan Presentations
- 09/26: Resume Writing and Interviewing
- 09/28: Career Gallery
- 10/03: Team Project Plan Presentations
- 10/05: Team Project Plan Presentations
- 10/10: Schedule and Teamwork
- 10/12: Creating and Giving Presentations
- 10/17: Team Alpha Presentations
- 10/19: Team Alpha Presentations
- 10/24: Team Alpha Presentations
- 10/26: Team Alpha Presentations
- 10/31: Design Day and the Project Videos
- 11/02: Camtasia Demo
- 11/07: Intellectual Property
- 11/09: Ethics and Professionalism
- 11/14: Team Beta Presentations
- 11/16: Team Beta Presentations
- 11/21: Team Beta Presentations
- 11/23: Team Status Reports
- 11/28: Beta Presentations
- 11/30: Team Status Reports
- 12/05: Project Videos
- 12/07: Project Videos and All Deliverables
- 12/08: Design Day Setup
- 12/09: Design Day
- 12/15: Project Videos



Urban Science Capstone Lab

- [3352 EB](#)
- Door Lock
 - Electronic Keypad
 - Code = #####
 - Do Not Give Out to Other Students
- Systems
 - Four PC's per Team
 - One Dell Rack-Mounted Server
 - Three Development Machines
 - ❖ Two 27" iMacs
 - ❖ One 13" MacBook Pro (Optional)
 - Team 100% Responsible
 - Building
 - Maintaining
 - Securing
 - Backing Up
- Books
- WiFi
 - SSID: CSE498, CSE498 5MHz
 - Key: ???????
- Conference Area
 - Team Meetings
 - Client Conference Calls
 - Google [Conference Calendar](#)
- Appliances
 - Water Cooler/Heater
Nota Bene: The water cooler is not connected to a drain. Do not pour things into it, like rinsing out your water container.
 - Whirlpool Refrigerator
 - Cold Water From Bottled Water
 - Ice From Bottled Water
 - Microwave
 - Keurig Coffee Maker
- Lockable Storage
 - One Drawer Per Team
 - Assigned and Labeled
 - Obtain Keys from CSE Office



Scheduled Lab Times

- No Formal Lab Sessions
- “Credit” for Scheduled Weekly Meetings
 - Team Meetings
 - Client Conference Calls
 - Triage Meetings with Spencer
- Meeting Times TBA With
 - Team
 - Client
 - Spencer
- Students must be available to meet.



Capstone Overview

✓ Course Logistics

➤ Client Projects

• Course Logistics (Continued)



Team / Project Generalities

[1 of 3]

- Clients
 - Vary in Size and Type
 - Client contacts/mentors are “volunteers”.
- Team Contact Person
 - Picked By Team
 - Main Point of Contact for Client



Team / Project Generalities

[2 of 3]

- Project Types
 - All Significant Software Development
 - Vary in Specifics
- Project Level of Difficulty
 - Hard Enough
 - But Not too Hard
- Deliverable
 - To the Client
 - By the Due Date



Team / Project Generalities

[3 of 3]

- Challenges
 - Very Short, Unforgiving Time Line
 - Client Contact
 - Team Dynamics
 - Project Plan (in Three Weeks)
 - Entirely New...
 - Languages
 - Environments
 - API's
 - SDK's
 - Processes
 - Protocols
 - Etc.
 - Project Management
 - Etc...



Project Specifics

- Vary
 - Type
 - Current State of Specificity
- Challenge
 - Connect with Client
 - “Nail Down” the Project
 - Hard Enough
 - Not too Hard
 - Avoid Feature Creep
 - Course Feature, Not Bug



Intellectual Property and Non-Disclosure Agreements

- Intellectual Property Agreement
 - You agree to assign ownership of intellectual property that may be created as a result of your project to your client.
 - Copyrightable Program Code
 - Patentable “Ideas”
 - Some clients will require an IP agreement.
- Non-Disclosure Agreement
 - You agree not to disclose client confidential information.
 - Some clients will require an NDA.
- To date...
 - Most code has not gone directly into production.
 - No patents have resulted.
- Use agreements provided by MSU.
- Always Contact Dr. D. Before Signing Anything



Project Teams

- Team Amazon
- Team Auto-Owners
- Team Avata
- Team Ford
- Team GM
- Team Meijer
- Team Mozilla
- Team MSUFCU
- Team Quicken Loans
- Team Rook
- Team Spectrum Health
- Team Symantec
- Team TechSmith
- Team Urban Science
- Team Whirlpool
- Team Yello



Team Amazon

Project Overview

Asa: Your Amazon Shopping Assistant

- Functionalities
 - Provide Personal Shopping Assistant
 - To Amazon
 - Via Messaging Apps
- Features
 - Learn Preferences of User
 - Support Shopping for User or Others
 - Handle Various Messaging Apps
 - Facebook Messenger
 - Slack
 - Twilio
- Technologies
 - Facebook Messenger Bot and Facebook APIs
 - Amazon SNS / Twilio
 - Slackbot API
 - Amazon Product Advertising API
 - Amazon Web Services (AWS)
 - Machine Learning
 - Storage Solution
 - Lambda
 - API Gateway
 - Node
 - RESTful Web Services
 - Natural Language Processing



Seattle, Washington
Detroit, Michigan

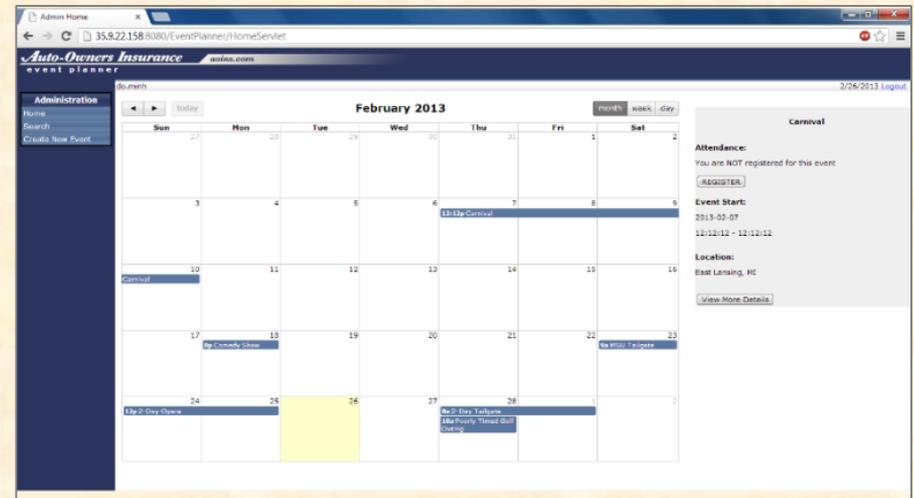


Team Auto-Owners

Project Overview

Mobile Event App

- Functionalities
 - Provide Event Management Apps
 - For Associates, Agents and External Partners
 - Via Web and Mobile Apps
- Features
 - Provide Attendee Functionality
 - Build Personal Profile
 - Register for Events
 - Access Event Materials
 - Provide Feedback
 - View Newsfeeds
 - Support Administrative Functionality
 - Build, Edit and Update Events
 - Send Email and Text Messages
 - Build and Administer Event Surveys
 - Generate Reports
- Technologies
 - CSS / HTML / JavaScript / PHP
 - Apple iPads and iPhones (iOS) / Swift or Objective-C
 - Google Android Tablets and Phones / Java
 - Database Technologies (Microsoft SQL or MySQL)



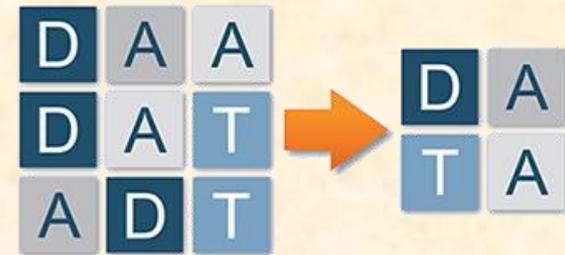
Lansing, Michigan

Team Avata

Project Overview

Security Analytics Suite: Dataset Merger Tool

- Functionalities
 - Automatically Find and Merge Duplicate Records
 - Within and Across Security Datasets
- Features
 - Design and Implement Dataset Matching Algorithm
 - Allow Users Approval or Disapproval
 - Present Results Graphically and Textually
 - Build User Interface In ReactJS
 - Handle
 - Various Data Sources and Schema
 - Very Large Datasets
- Technologies
 - JavaScript / React JS
 - Java 8 / Spring Boot Framework / Hibernate Framework
 - SQL Server
 - Dataset Matching Algorithms
 - String Matching
 - Complex Error Code Matching
 - Lucene
 - Elastic Search



Team Ford

Project Overview

In-Car Calendar and Task Integration

- Functionalities
 - Provide In-Car Calendaring and To-Do Lists
 - That Integrates with Popular Services
 - By Leveraging Ford Sync AppLink
- Features
 - Provide Native Apps for Apple iOS and Google Android
 - Support Popular Calendaring and Task Software
 - Microsoft Exchange / Outlook
 - Google Calendar / Tasks
 - Handle Voice-Enabled Input
 - Read Remaining Events for Today
 - Add Calendar Event
 - Mark Task Complete
 - Etc.
 - Support Advanced Use Cases
 - Add Automatic Reminder to Refuel
 - Schedule Oil Change
 - Disable Manual Input When Vehicle In Motion
 - Etc.
- Technologies
 - Ford Sync 3 AppLink Emulator
 - Apple iPads and iPhones (iOS) / Swift or Objective-C
 - Google Android Tablets and Phones / Java
 - Microsoft SQL Server 2012



Dearborn, Michigan



Team GM

Project Overview

Predictive Rich Cards

- Functionalities
 - Leverage Microsoft Cortana and Google Now Cards
 - To
 - Answer User-Initiated Queries
 - Deliver Predicted Information Proactively
 - Based on Search Habits of User
- Features
 - Provide Native Apps for Apple iOS and Google Android
 - Utilize Multiple Search Sources
 - Use Natural Language Web Services
 - Support Variety of Content
 - Action Items
 - Approvals
 - Workflows
 - Calendar Items
 - Etc.
- Technologies
 - Google Now Cards / Microsoft Cortana
 - Apple iPads and iPhones (iOS) / Swift or Objective-C
 - Google Android Tablets and Phones / Java
 - Microsoft SQL Server
 - Microsoft Azure Machine Learning Studio
 - Machine Learning and Artificial Intelligence Tools



Detroit, Michigan
Warren, Michigan



Team Meijer

Project Overview

Intelligent Shopping List

- Functionalities
 - Generate Shopping List
 - Based on Recent Purchases
 - Via Meijer's mPerks
- Features
 - Auto-Generate Initial Shopping List
 - Provide Review and Refinement Capabilities
 - Handle Auto-Delivery of Purchases
 - Support both Apple iOS and Google Android Mobile Devices
 - Provide Back-End Administration Apps
- Technologies
 - CSS / HTML / JavaScript / PHP
 - Microsoft Azure / Azure Mobile Services
 - Microsoft SQL Server 2012
 - Microsoft C# / .NET MVC / ASP.Net
 - Meijer Web Services
 - Xamarin or PhoneGap or Swift / Java
 - Crashlytics



meijer[®]

Grand Rapids, Michigan

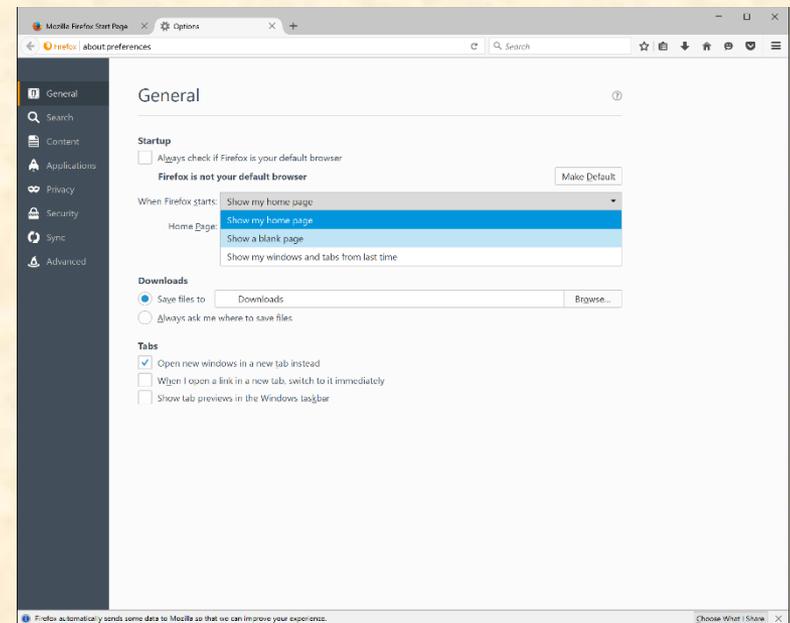


Team Mozilla

Project Overview

Improvements to <select> Dropdown for Firefox

- Functionalities
 - Improve Firefox's Desktop <select> Dropdown
 - For Users Worldwide
- Features
 - Clarify Disabled States
 - Improve Readability
 - Increase Size of Items
 - Provide Search for Large Lists
 - Refactor for Firefox's New Multi-Process Architecture
- Technologies
 - CSS / HTML / JavaScript
 - JavaScript
 - XUL (XML User Interface Language)
 - C++
 - IRC
 - Mozilla's Bugzilla
 - Mercurial



Mountain View, California

Team MSUFCU

Project Overview

Member Ratings and Reviews

- Functionalities
 - Add Ratings and Reviews Features
 - Of MSUFCU Products and Services
 - By MSUFCU Members
- Features
 - Provide Ability to
 - Rate Numerically Using Scale of 1 to 5
 - Write Comments By Username or Anonymously
 - Model After Amazon and iTunes
 - Support Multiple Platforms
 - Web App
 - Native Apple iOS and Google Android Apps
- Technologies
 - CSS / HTML / JavaScript / PHP
 - Apple iPads and iPhones (iOS) / Swift or Objective-C
 - Google Android Tablets and Phones / Java
 - WebGL
 - MySQL
 - Encryption Based on SQL Standards



Team Quicken Loans

Project Overview

Pharos: Hiring Process Automation

- Functionalities
 - Build Intelligence and Personality Test App
 - For Team Member Selection Process
 - To Minimize Subjectivity
- Features
 - Support Timed and Untimed Tests
 - Present Results Textually and Graphically
 - Align Test Outcomes with Internal Roles
 - Leverage
 - Data Science and Business Intelligence
 - Progressive Random Matrices
- Technologies
 - CSS / HTML
 - JavaScript / AngularJS
 - Microsoft C# / .NET
 - SQL Server
 - GitHub



Quicken Loans®
Engineered to **Amaze®**
Detroit, Michigan



Team Rook

Project Overview

Enhanced Network Anomaly Detection Suite

- Functionalities
 - Enhance Rook's Anomaly Detection Suite (ADS)
 - By
 - Adding Features to the Windows Agent
 - Creating a Linux-Based Agent
 - Creating an Apple OS X Agent
 - Building a Web Management Console
- Features
 - Improve Performance of Windows Agent
 - Design and Build New Agents
 - For Linux and Apple OS X
 - Based on Windows Agent Features
 - Add Encryption to Communication and Storage
 - Support Remote Updates
- Technologies
 - Operating Systems
 - Ubuntu Linux
 - Microsoft Windows x64 (7, 8 & 10)
 - Apple OS X (10.0 – 10.11)
 - PCAP Library (Packet Capture)
 - PF_RING (Kernel Module for NIC Polling)
 - React.js (Management Console)
 - MySQL, SQLite
 - Machine Learning
 - Suricata (Network Monitoring Engine)
 - C (Agent/Server)



ROOK[®]
SECURITY
Indianapolis, Indiana



Team Spectrum Health

Project Overview

Healthier Communities Time Banking

- Functionalities
 - Create Online Community Connecting
 - Homebound People in Need
 - With Volunteer Helpers
- Features
 - Create and Edit User Profiles
 - Request Services Needed
 - List Assets and Resources Offered
 - Track Accomplishments
 - “Bank” Volunteer Time
 - Gamify with Badging and Leader Boards
- Technologies
 - Progressive Web Apps
 - CSS / HTML
 - JavaScript / TypeScript
 - Microsoft Entity Framework
 - Microsoft C# / .NET
 - Microsoft SQL Server



SPECTRUM HEALTH 

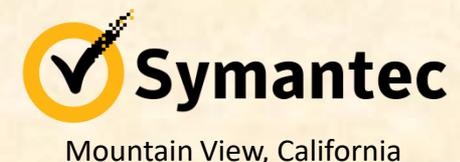
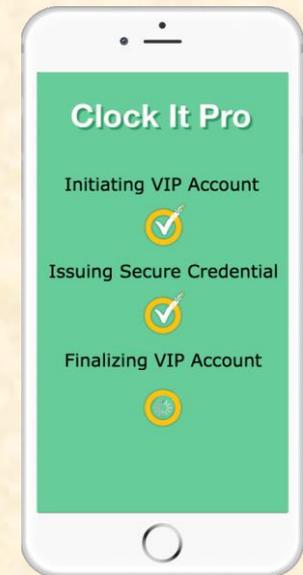
Grand Rapids, Michigan

Team Symantec

Project Overview

Web Frameworks for Multi-Factor Authentication

- Functionalities
 - Design and Build Web Frameworks
 - For Multi-Factor Authentication
 - Using Symantec's Validation and ID Protection (VIP) Service
- Features
 - Support Leading Web Frameworks
 - Node.js
 - Python
 - Ruby
 - Handle
 - Self-Registration
 - Strong Authentication
 - Two-Factor Authentication via VIP Push
 - Logins by Users Across Multiple Websites
 - Provide SDKs on Symantec's GitHub
 - Build Sample Apps
- Technologies
 - Symantec Validation and ID Protection (VIP) Service
 - VIP Manager
 - VIP SDK Documentation
 - Java / Node.js / Python / Ruby
 - Apiary
 - GitHub



Team TechSmith

Project Overview

Video Sentiment Analysis

- Functionalities
 - Determine Video Viewer's Sentiments
 - While Viewing a Video
 - Automatically and Passively
- Features
 - Provide
 - Player for Video Viewer
 - Website for Video Author
 - Keep Track of Video Viewer Inputs
 - Speed Up?
 - Skip Ahead? Rewind?
 - Stop Before End?
 - Determine Viewer Emotions
 - Record Viewer with Web Camera
 - Process with Microsoft Cognitive Service Emotion API
 - Generate and Display Analytics
- Technologies
 - CSS / HTML / JavaScript / PHP
 - ASP.Net MVC
 - Microsoft C# / .NET and XAML
 - Microsoft Azure Cloud Computing
 - Windows 10 Universal Windows Platform Player
 - Windows Media Foundation
 - Microsoft Cognitive Services



Team Urban Science

Project Overview

Dealership Simulator 2017

- Functionalities
 - Educate Urban Science Associates
 - About Running a Successful Automobile Dealership
 - By Playing a Game
- Features
 - Allow Dealership Location Selection
 - Geographical Characteristics
 - Population Statistics
 - Manage Dealership Investments
 - Advertising and Marketing
 - Facilities
 - Service Department
 - Include Random “Life” Events
 - Manufacturer Rebates
 - Vehicle Recalls
 - Acts of Nature
 - Base on Rules Provided by Urban Science
 - Support Web App and Mobile Apps
- Technologies
 - Game Design and Implementation
 - Entity Game Framework
 - CSS / HTML / JavaScript
 - Apple iPads and iPhones (iOS) / Swift or Objective-C
 - Google Android Tablets and Phones / Java



URBAN SCIENCE.

Detroit, Michigan



Team Whirlpool

Project Overview

Mooch

- Functionalities
 - Enable Food and Ingredient Sharing
 - Within Apartment or Condo Complex
 - Via Mobile Apps
- Features
 - Support Both Supply and Demand
 - Provide Browsing
 - What's available nearby?
 - What can I make?
 - Create Social Community
 - Handle
 - Virtual Currency
 - Trading, Selling or Giving Away
- Technologies
 - Apple iPads and iPhones (iOS) / Swift or Objective-C
 - Google Android Tablets and Phones / Java
 - Google App Engine
 - Google Analytics
 - RESTful Web Services



Benton Harbor, Michigan



Team Yello

Project Overview

Visualizing Dynamic Data Exploration

- Functionalities
 - Visualize Large, Multi-Dimensional Data
 - Interactively, Creatively and Intuitively
 - To Identify Insights and Trends
- Features
 - Provide Web App
 - Handle Very Large Data Sets
 - Leverage Various Visualization Techniques
 - Shape
 - Size
 - 3D
 - Color
 - Pan / Zoom
 - Enable Manipulation of Data
 - Filtering
 - Uploading
 - Exporting
 - Support Augmented Reality or Virtual Reality Hardware
- Technologies
 - CSS / HTML
 - JavaScript
 - D3.js
 - Ruby on Rails



yello
Chicago, Illinois

First Assignments

- Read the Syllabus.
- Check out the Lab (3352 EB).
 - See if you can find it.
 - See if you can get in.
- Check out the Web Site.
- Research your Project.
 - Client
 - Technologies



What's Next?

- Teams
 - Assignments by Email Tonight
 - Meet Initially by Tomorrow Afternoon
 - Lab Machine Assignments in Lab
 - Start Configuring Lab Machines
 - Team Photos
 - Wednesday 09/07, After All-Hands Meeting
 - Dress Casual (But Appropriate)
 - Schedule for it.
- Client
 - Contact by Email by Tomorrow COB (Close of Business)
 - Conference Call or On-Site Meeting by Friday
 - Review Project Proposal



Capstone Overview

✓ Course Logistics

✓ Client Projects

➤ **Course Logistics (Continued)**



Urban Science Capstone Lab Machines

- Four Per Team
 - One Rack-Mounted Dell Server
 - Connected to the Outside World
 - Keep Secure
 - Two 27" iMacs (Just Upgraded to 32GB RAM)
 - One 13" MacBook Pro (Optional)
- Operating Systems on iMacs and MBPs
 - Run OS X Yosemite
 - Install VMware Fusion (from [here](#))
 - Create Virtual Machines As Needed
 - Windows Vista, 7, 8, 10 (!Windows XP)
 - Linux



Capstone Lab Miscellany

[1 of 2]

- Security
 - Keep lab doors closed.
 - Do not open doors for strangers
 - Do not give out door key code to others.
 - Do not invite non-capstone students to work in the lab with you.
 - Email Dr. D. if door becomes unlocked.
- Wireless
 - SSID: CSE498
 - Key: ???????
- Coffee
 - Some Provided by Dr. D.
 - Bed, Bath & Beyond (Get 20% Off Coupon)
- Game Playing / Video Watching
 - Not On Monitors Facing Hallway
 - Not If Other Team Members Need Machine



Capstone Lab Miscellany

[2 of 2]

- Do not “maniac” the wires and cables.
- Keep the lab neat and clean.
 - Lived In, Okay.
 - Messy, Not Okay.
- Respect other teams’ spaces.
- Garbage Containers
 - Empty the small one by the coffee maker into a larger one.
 - Put larger ones out in the hall at night if near full.
 - Put back in the lab in the morning if empty.
- Turn the lights out if you’re the last one out.
- Be careful with cabinet drawers; don’t “maniac” them.



Mobile Devices Available

- For Capstone Project Use
- By Team for the Semester
- iOS
 - 5 iPads
 - 1 iTouch
- Android
 - 1 Tablet
 - 1 Phone
- Surface Pro 3



Expectations & Workload

- Extremely High For Both
- Your MSU Career Capstone
- Addition to Your Personal Portfolio
- Experience Viewed Like an Internship
- Interview Talking Points
- Leverage Into a Job Offer



Schedules

- Schedules > All-Hands Meeting

- Schedules > Major Milestones

- 09/14: Status Report Presentations
- 09/19: Project Plan Presentations
- 10/17: Alpha Presentations
- 11/14: Beta Presentations
- 12/05: Project Videos
- 12/07: All Deliverables
- 12/08: Design Day Setup
- 12/09: Design Day

- Attendance is required.
- No excuses are accepted.
- Do not schedule anything including during these times interviews, travel home, etc.
- Will coordinate with your interviews.



Meeting Attendance

- Required
 - All-Hands (Class) Meetings
 - Team Triage Meetings
 - 5% of Final Grade
 - Late == Absent
 - Almost No Excuses Accepted
 - One or Two Excused Possible for Interviews
 - Must Provide Information
 - Date, Company, Recruiter Name & Contact Info
 - In Advance
 - To Both Dr. D. and Spencer
 - Must Attend (No Excuses Accepted)
 - Your Team Presentations
 - All Project Video Viewing
 - Design Day
- Do NOT schedule interviews.
Do NOT schedule ANYTHING.
Do NOT buy plane tickets.



Team Organization

- Up to Each Team
- Organize into Roles
 - Client Contact
 - Program Manager
 - Developer
 - Tester
 - Systems Administrator
 - Etc...
- Everyone must make technical contributions.



Team Dynamics

- Key to Success
- Significant Component of Course Grade
- Address Problems Immediately
 - Within Team
 - With Dr. D. and/or Spencer
- Be Ready to Discuss During Interviews



Grading

[1 of 3]

- Team (70%)
 - Project Plan Document & Presentation 10
 - Alpha Presentation 10
 - Beta Presentation 10
 - Project Video 10
 - Project Software & Documentation 25
 - Design Day 05
 - Total 70
- Individual (30%)
 - Technical Contribution 10
 - Team Contribution 10
 - Team Evaluation 05
 - Meeting Attendance 05
 - Total 30



Grading

[2 of 3]

- Final Grade Sum Of...
 - Individual Total
 - % of Team Total Based on Team Contribution
- Grand Total =
(Individual Total)
+
(Team Total) * (Team Contribution) / 10.0
- *Nota Bene*: Your Team Contribution will have a very significant effect on your final grade.



Grading

[3 of 3]

- We reserve the right to make changes with sufficient notice.
- No special consideration will be given for final grades including but not limited to
 - status in any academic program including CSE,
 - financial aid,
 - rank in the armed forces,
 - job,
 - graduation,
 - mortgage,
 - wedding,
 - visa status,
 - or anything else.



Integrity of Scholarship

- MSU's policies will be enforced.
- Individual and team work must be original.
- Violators...
 - ...will be referred to the appropriate deans.
 - ...may receive a grade of F in the course.



Using Resources

- Ok For “Help”
 - People
 - Past Capstone Teams
 - Other Capstone Teams
 - Faculty Members
 - Articles
 - Sample Code
 - Etc...
- Not Ok For “Entire” Project
- If Unsure, Ask Dr. D. and/or Spencer



Using Existing Code

- Ok
 - Examples
 - Prototypes
 - Open Source Code
 - Fragments
 - Libraries
 - Utilities
- Not Ok
 - Vast Amounts of Your Project
 - Not Open Source
- Ask Client in Advance
- Document and Report All Existing Code Used
- Be Careful!
- If Unsure, Ask Dr. D. and/or Spencer and/or Your Client



Design Day

- College of Engineering Event
 - Engineering Building
 - Friday, December 9, 2016
- Displays (Booths) of Design Projects
 - CSE Capstone
 - ECE Capstone
 - ME Capstone
 - Etc...
- Presentations and Awards
 - Panel of Judges
 - CSE Team Project Videos



Travel to Client

- Reimburse for Mileage for Personal Car
- Travel Within Michigan (Outside of Lansing)
 - Benton Harbor
 - Grand Rapids
 - Metro Detroit
- From East Lansing to Client and Back
- One Car Per Team Per Trip
- See Courtney in the CSE office in advance.



VISA

- Verified Individualized Services and Accommodations
- Let us know immediately.
- We will work with you.

Office Hours

- Any Time...
 - Visit: 3149 EB
 - Call: 353-5573
 - Email: (dyksen@cse.msu.edu)
- Make Appointment



Capstone Overview

✓ Course Logistics

✓ Client Projects

✓ Course Logistics (Continued)

Questions?



What's ahead?

[1 of 4]

- Team Photos
 - Informal: After Meeting Next Week
 - Formal: After Each Project Plan Presentation
 - Setup
 - Team Machines
 - Dell Server (Ask Spencer)
 - Apple iMacs
 - Team Software
 - Microsoft Office
 - ❖ Word and PowerPoint
 - ❖ Microsoft Windows Version
 - Web Server
 - Code Repository
 - SDK's
 - Etc.
- Required.
Get from Spencer.
- 



What's ahead?

[2 of 4]

- All-Hands Meetings
 - ~~08/31: Capstone Overview~~
 - 09/05: (Labor Day, No Meeting)
 - 09/07: Project Plan
 - 09/12: Risks and Prototypes
 - 09/14: Status Report Presentations
 - 09/19: Team Project Plan Presentations
 - 09/21: Team Project Plan Presentations
 - 09/26: Resume Writing and Interviewing
 - 09/28: Career Gallery
 - 10/03: Team Project Plan Presentations
 - 10/05: Team Project Plan Presentations



What's ahead?

[3 of 4]

- Team Status Report Presentations
 - [PowerPoint Template](#)
 - Due 4:00 a.m., Wednesday, September 14
 - 1 Week  Get on it, now!
 - Email to Dr. D.
 - Subject: Team <Company Name>: Status Report
Subject: Team Auto-Owners: Status Report
 - Attachment: team-<company-name>-status-report-presentation.ppt
Attachment: team-urban-science-status-report-presentation.ppt
- Dr. D. Will Combine Into Single PowerPoint
 - To Speed Things Up During Meeting
 - Do NOT Modify Master Slide
 - Must Use Windows Version of Microsoft Office
- Each Team Presents
 - Using Dr. D.'s Laptop
 - At Most 5 Minutes (Rehearse Timing)
 - Single or Multiple Presenters (Your Choice)



What's ahead?

[4 of 4]

- **Project Plan Presentations**

- **PowerPoint Template**

- Download Now
- Read the Read Me Slide (Over and Over and Over...)

- **Submission**

- Both Project Plan Document and PowerPoint Slide Deck
- Due 4:00 a.m., Monday, September 19
- See Submission Instructions in Template

 **Get on it, now!**

- **Presenting**

- 4 Teams Per Meeting Over 4 Meetings
- Schedule Posted Sunday Evening
- Strict 15 Minute Time Limit
- Use Team Member Laptop
 - ❖ Bring Power Cord
 - ❖ Test In Meeting Room (in Advance)
- Rehearse
- 5% of Final Grade
- Business Casual Dress

- **Formal Team Photos**

- Immediately Following Meeting
- In Capstone Lab

- **Schedule Conflicts**

- Only for Interview Trips
- Notify Dr. D. Well In Advance

