MICHIGAN STATE UNIVERSITY Project Plan Presentation Artificial Intelligence (AI) Training Course

The Capstone Experience

Team HAP

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Spring 2024



From Students... ...to Professionals

Project Sponsor Overview



- Health Alliance Plan (HAP) is a non-profit Michigan insurer, serves 430,000 members
- Workforce of 1100, prioritizes employee development
- Allocates 90% of premium revenue directly to healthcare services



Highest in Member Satisfaction among Commercial Health Plans in Michigan For J.D. Power 2023 award information, visit jdpswer.com/awards

Project Functional Specifications

- Simplify AI learning with a 15-minute webbased course covering AI basics, tailored for all technical levels.
- Integrate an interactive AI avatar "professor" for engaging, personalized content delivery and Q&A sessions.
- Empower HAP staff to utilize AI for productivity enhancement and problem-solving in everyday tasks.

Project Design Specifications

- Seven interactive modules with quizzes and a resource hub for comprehensive AI learning.
- Progress-tracking dashboard with easy navigation to modules, quizzes, and resources.
- Engaging chapters with in-depth content, Q&A, and live chat for interactive learning.
- Integrated AI avatar for interactive text and voice chat, simulating real AI interactions.



Screen Mockup: Dashboard

Get Started w	All rith Allie	hap	Search	Q
Dashboard Modules Quizzes	4 Modules		Completed 0 Modules	
Resources	Module 1 8 Chapters 485 Complete	Module 2 5 Chapters eth Complete	Module 3 8 Chapters 95 Complete	
	Module 4 5 Chapters IN: Complete	Module 5 5 Chapters	Module 6 5 Chapters 95 Complete	



Screen Mockup: Module

Lets Learn Get Started v	All Line Line	Search	٩				
Progress							
Ph formalism	Annual Children						
Intro	Intro Welcome to Artificial Intelligence: A Begi	inner's Guide					
Module 1							
Module 2	Are you curious about the world of Artificial Intelligence but don't know when to start? Join us for a beginner- Intendly journey into the beauce of AL designed for those with little to no prior tech knowledge.						
Module 3		Module 1: Understanding Language Modula Espore the fundamentals of Language models and how they analise computers to understand and perverate					
Module 4	human-like text.						
Module 5	Module 2: Introduction to Vector Databases Discover the role of vector databases in organol	ing and processing data afficiently for AI systems.					
Module 6	Module 3: Decoding Neural Networks Learn about neural networks, the building blocks of AL and how they simulate human brain functions to process						
Module 7	information.						
Final Quiz	Module 4: Comparatility Analysis of Lange Language Models Compare different large language models and understand their strengths, weaknesses, and common applications.						
	Module 5: Generative vs Predictive AI Distinguish between generative and predictive A	i approaches and explore their respective uses and	initations.				
	Module & Sudiety and Pairmose in At Examine ethical considerations in At developme algorithms.	nt, focusing on safety measures and ensuring faime	an in				
	Module 7: Mastering Prompt Engineering Develop skills in crafting effective prompts to int						
	you're a complete beginner or simply curious ab	ry into the faccinating world of Artificial Intelligence. out the technology shaping our future, this course ex ppreciate the basics of AL Let's due in and explore 5	Il provida				
		Chi	apter 1 O				

Screen Mockup: Quiz



Screen Mockup: Avatar



Project Technical Specifications

- Using Python and FastAPI for backend
- MongoDB for database
- Next.JS, Typescript, and shadcn/ui for frontend
- Communicating via RestAPI routes
- OpenAl for text generations and Pinecone for vectorstore memory
- D-ID for live avatar generations
- Docker to containerize and GCP to deploy

Project System Architecture



Team HAP Project Plan Presentation

Project System Components

- Docker
- FastAPI
- Google Cloud Platform
- MongoDB
- Next.JS
- OpenAl
- Pinecone
- GitLab
- D-ID

Project Risks

Avatar Cost

- High costs associated with avatar services.
- Use basic cached animations for the avatar and rely on chat responses during Q&A to manage costs.
- Technical Limitations of AI and LLMs
 - Potential inaccurate responses from AI and LLMs.
 - Regularly update and train the AI with relevant data and implement a feedback system for prompt correction of inaccuracies.
- Latency of Product
 - Potential latency affecting user experience in Al-driven interfaces.
 - Optimize the text-to-speech pipeline and cache content and avatar to reduce latency and enhance interaction.
- Content Relevance
 - Rapid AI advancements risk making course content quickly outdated.
 - Schedule regular updates and leverage AI adaptability

Questions?

