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.

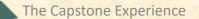
Project Design Specifications

- 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

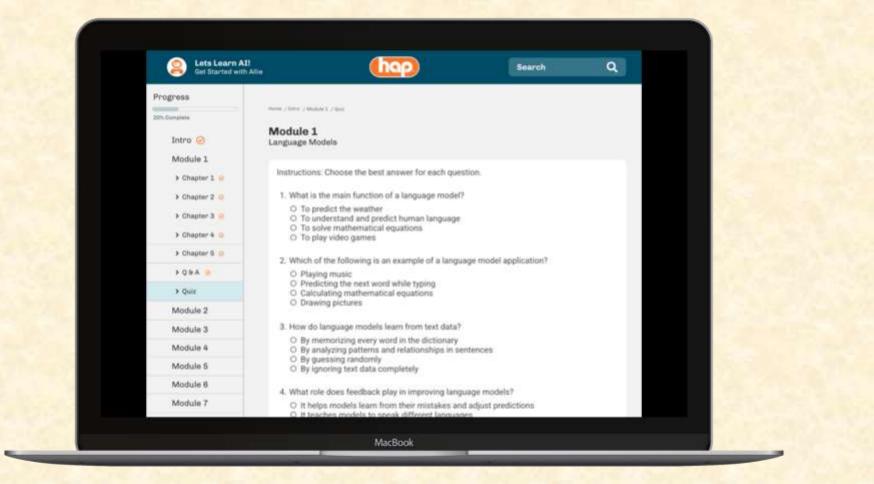
| Get Started w | All rith Allie | hap | Search | Q |
|---------------------------------|--|--|---------------------------------------|---|
| Dashboard Modules Quizzes | 4 Modules | | Completed 0 Modules | |
| Resources | Module 1 8 Chapters 485 Complete | Module 2 5 Chapters eth Complete | Module 3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



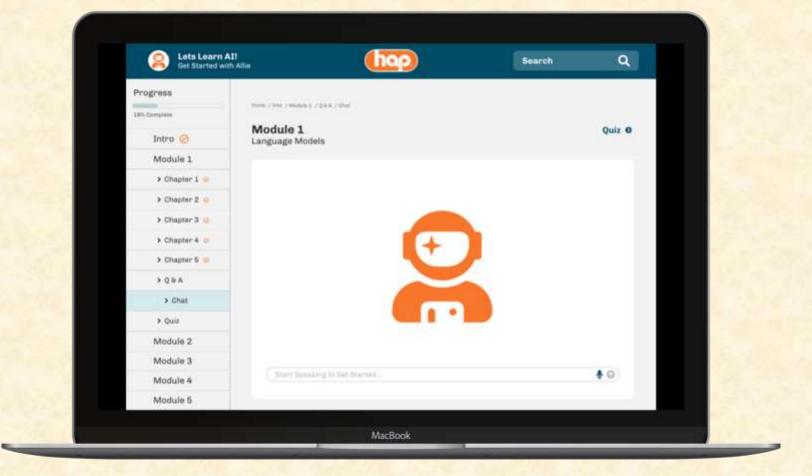
Screen Mockup: Module

| 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



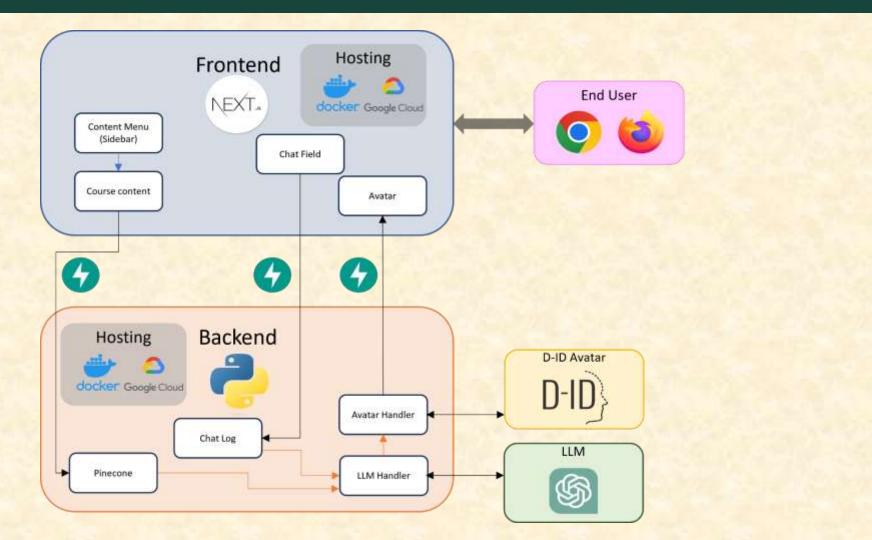
Screen Mockup: Avatar



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?

