Project Plan Presentation
Leveraging OpenAI for Business Analytics

The Capstone Experience

Team HAP
Evan Bean
Lily Hami
Ziqi Liu
Brendan Murphy
Sukruth Rao

Department of Computer Science and Engineering
Michigan State University
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Project Sponsor Overview

- **Michigan’s Premier Provider:**
  - Not for profit health insurance company
  - Serving the healthcare needs of Michigan residents

- **Comprehensive Coverage Options:**
  - Diverse plans: Individual, family, Medicare, Medicaid
  - Inclusive coverage: Medical, dental, vision, etc.

- **Wellness-Centric Approach:**
  - Emphasis on preventative care and wellness
  - Access to fitness facilities, health programs, and screenings
Project Functional Specifications

• **Enhanced Customer Service:**
  ▪ Improve the customer service experience by understanding the reason behind customer calls

• **Information Retrieval:**
  ▪ Help HAP customers quickly access answers available on hap.org

• **Plan Selection Assistance:**
  ▪ Aid customers in choosing the most suitable health insurance plan
Project Design Specifications

• Call Summarization Tool
  ▪ User can upload a call transcript and will be given the call subject and identified keywords
  ▪ Raw data will be displayed in a table
  ▪ Data visualization for call topics will be displayed in a pie chart

• Chatbot Tool
  ▪ User can open the popup chatbot to ask questions about hap.org content
  ▪ Chatbot will be accessible from any page on the website for quick access

• Plan Selector Tool
  ▪ User will answer 10 questions (each individually displayed)
  ▪ Once completed, a recommended Medicare plan with links to additional information will be provided
Screen Mockup: Call Summarization Tool
Screen Mockup: Call Transcript Data Summarization Tool
Our plan types include health maintenance organizations (HMOs), preferred provider organizations (PPOs) and exclusive provider organizations (EPOs). These types of plans focus on preventative care and reducing the cost of health care:

**HMOs**

HMOs are usually more affordable than PPOs. HMO members coordinate their care through a primary care physician (PCP). Though HAP doesn't require you to get a referral from your primary care doctor to see a specialist, the specialist may require a referral. Check with the specialist's office to find out if you need a referral from your primary care doctor before making an appointment. **Find a doctor in our network.**

Some of the advantages of HMO plans include:

- Ability to choose and change primary care physician (PCP) as often as you like
- Access to providers and hospitals within the HMO's network
- Each covered family member can have a different primary care doctor

**PPOs**

PPOs offer more flexibility and choices. Some of the advantages of these plans include:

- No need to choose a primary care physician (PCP)
- Reduced out-of-pocket costs when you see in-network providers
- Members can see health care providers within our outside the PPO network without referrals

**EPOs**

EPOs combine the cost savings of HMOs with the flexibility of PPOs. These plans have the following advantages:

1. **HMO:**
   - With HMOs, you'll select a primary care physician (PCP) who will oversee your healthcare. HMOs don't typically require referrals to see specialists, although specialists themselves might request one.

   I'm trying to understand the differences between HMOs, PPOs and EPOs. Can you give me some guidance?
Screen Mockup: Chatbot Tool
Screen Mockup: Plan Selector Tool
Screen Mockup: Plan Selector Tool

Find Your Ideal Medicare Plan: Your Personalized Medicare Plan Selector

Answer the following 10 questions to help us recommend a personalized Medicare plan for you

Question 3 of 10

Do you have any specific healthcare needs or chronic conditions that require ongoing care?

Type here
Screen Mockup: Plan Selector Tool
Project Technical Specifications

• Front-end:
  ▪ React framework, HTML, CSS, JavaScript
  ▪ Will test by using Selenium

• Back-end:
  ▪ Flask, MySQL, OpenAI services
  ▪ Will test by using Pytest

• Containerization via Docker
Project System Architecture
Project System Components

• Hardware Platforms
  ▪ Google Cloud Platform for deployment

• Software Platforms / Technologies
  ▪ Docker to build and deploy our web application
  ▪ PyCharm IDE for development
  ▪ Gitlab for version control
Project Risks

• Risk 1
  ▪ Inaccurate summarization of call content by OpenAI
  ▪ Assess OpenAI’s ability by manually checking the transcripts we use and verifying that the summarization’s are accurate

• Risk 2
  ▪ Ensuring compliance with Protected Health Information (PHI) in call transcript processing
  ▪ Use ChatGPT generated call transcripts to avoid violate PHI laws

• Risk 3
  ▪ Cost implications of OpenAI API usage due to token requirements for integration
  ▪ Engage in open communication with client to understand the level of investment they want to make and actively monitor token usage

• Risk 4
  ▪ Dependency on a third-party API as the core functionality of the web application
  ▪ Redirect users to a hap.org FAQ page in the event that the OpenAI service is unavailable
Questions?