MICHIGAN STATE
U N I V E R S I T Y

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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From Students…
…to Professionals

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
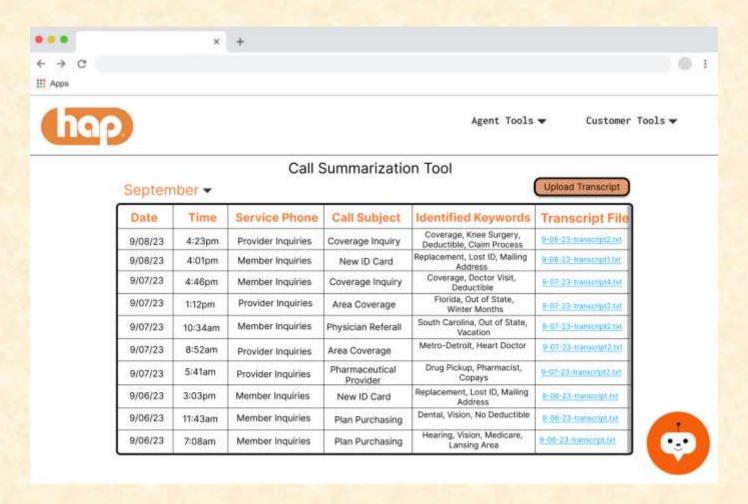- **Chatbot Tool**
    - User can open the popup chatbot to ask questions about hap.org content
    - Chatbot will be accessible from any page on the website for quick access
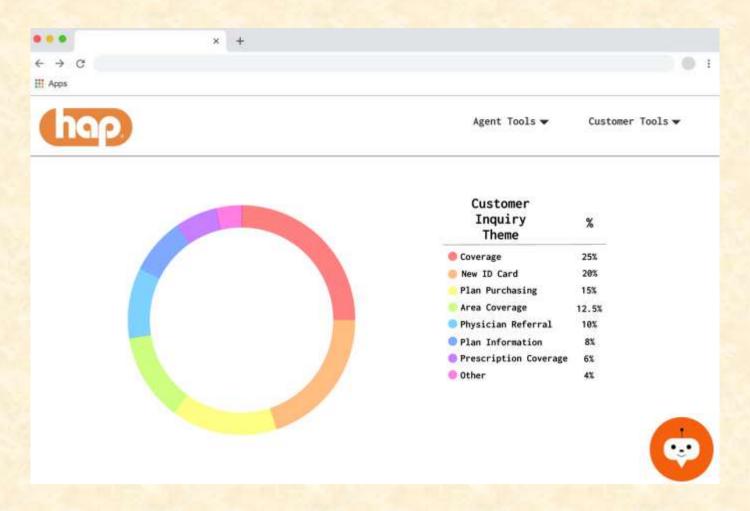- **Plan Selector Tool**
    - User will answer 10 questions (each individually displayed)
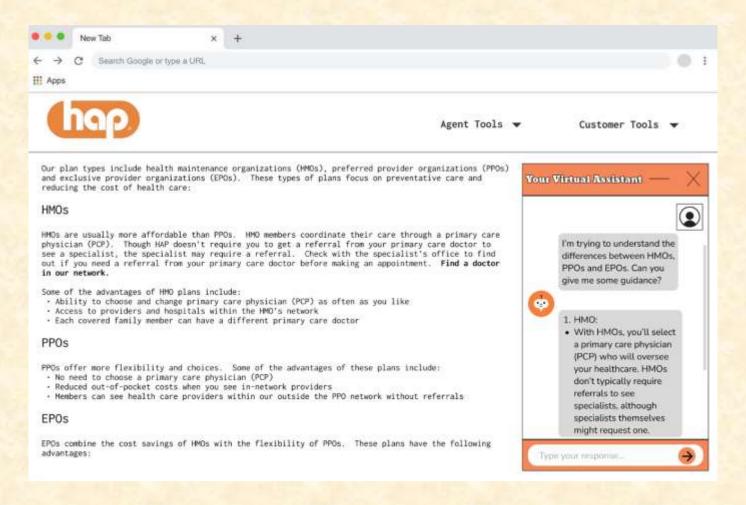   - Once completed, a recommended Medicare plan with links to additional information will be provided

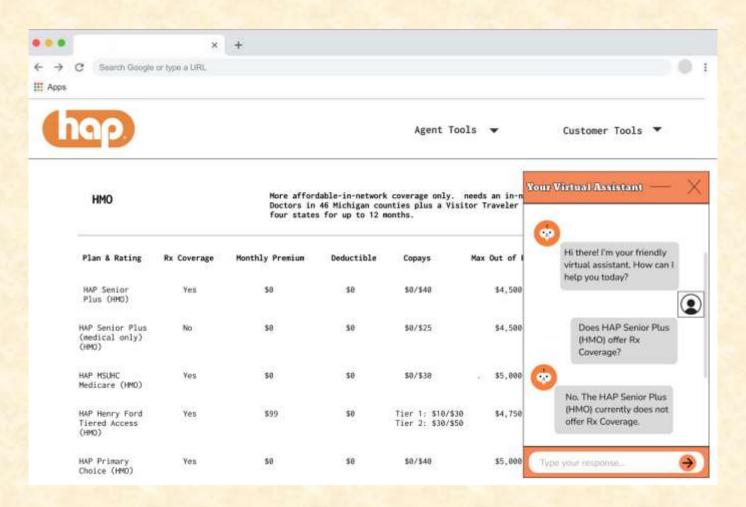# Screen Mockup: Call Summarization Tool

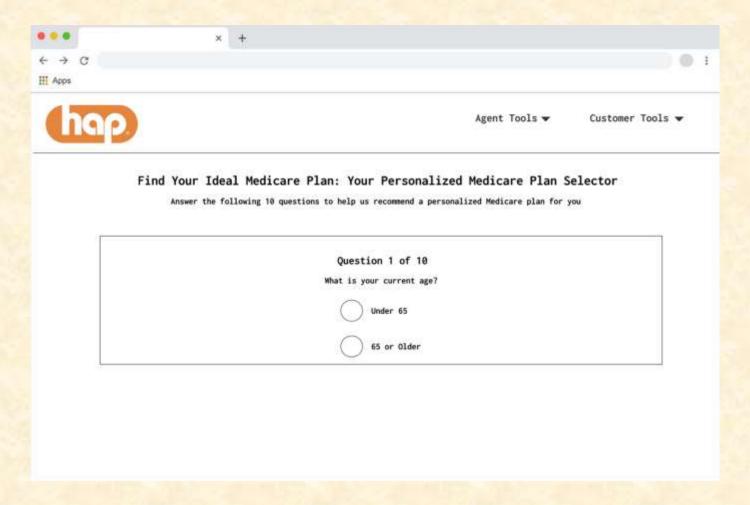# Screen Mockup: Call Transcript Data Summarization Tool
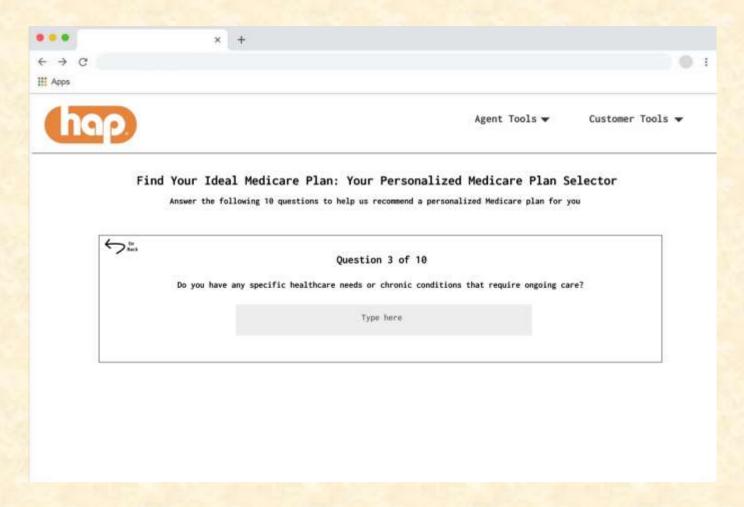
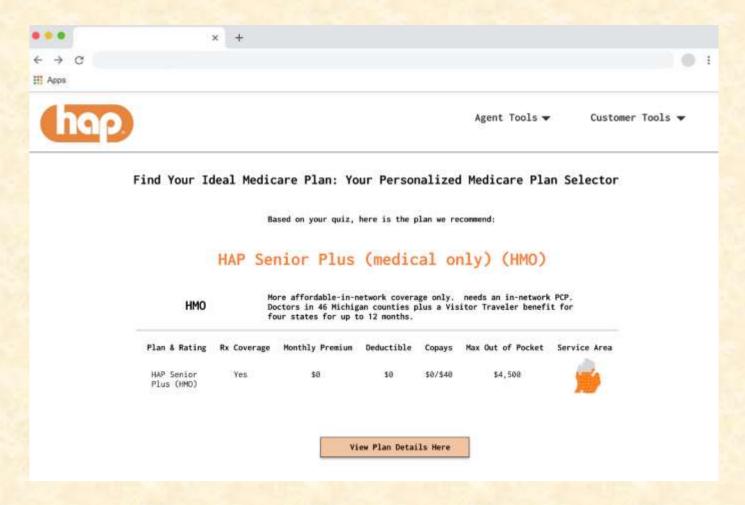# Screen Mockup: Chatbot Tool

Screen Mockup: Chatbot Tool

Screen Mockup: Plan Selector Tool

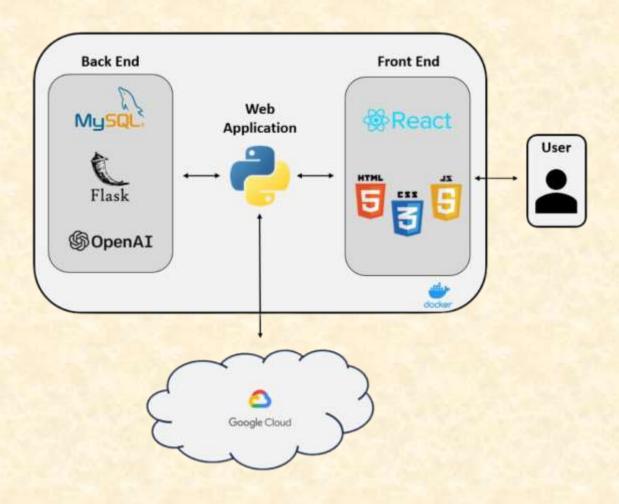# Screen Mockup: Plan Selector Tool

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?

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