

MICHIGAN STATE

UNIVERSITY

Beta Presentation

Leveraging OpenAI for Business Analytics

The Capstone Experience

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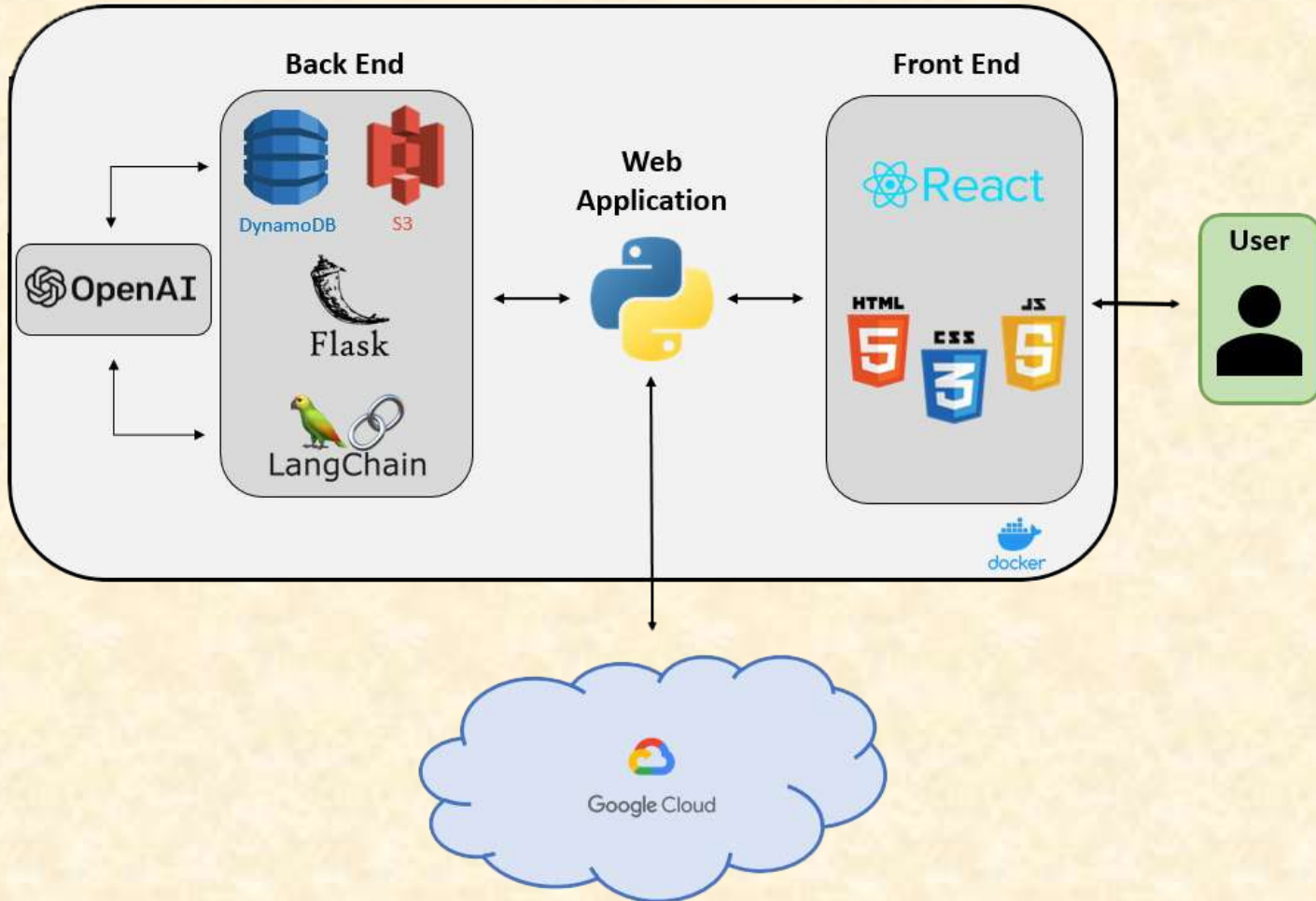
*From Students...
...to Professionals*

Project Overview

- Web Application with the following features:
 - Chatbot
 - Call summarization tool
 - Plan selector quiz
- Utilizing OpenAI and machine learning algorithms



System Architecture



Chatbot

The screenshot shows a web browser window titled "HAP AI Tools" with the URL "localhost:3000". The page header includes the "hap" logo and navigation links for "Agent Tools" and "Customer Tools". The main content area features a word cloud with "medicare" in large red letters, surrounded by other medical terms like "health", "insurance", "benefits", "patient", "surgery", "program", "advantage", "service", "doctor", "prescription", "care", "pains", "disease", and "hos". Below the word cloud are three orange buttons: "About HAP", "Our AI Tools", and "Team Information".

The chat window, titled "Your Virtual Assistant", shows the following conversation:

Virtual Assistant: Hello, I am your Virtual Assistant. Feel free to ask me a question relating to HAP!

User: what is a PPO?

Virtual Assistant: A PPO stands for Preferred Provider Organization. It is a type of health insurance plan that allows you to choose healthcare providers from a network of preferred providers. With a PPO, you have the flexibility to see specialists or receive medical services outside of the network, but you will typically pay higher out-of-pocket costs for those services.

User: Does HAP offer PPO plans?

Virtual Assistant: Yes, HAP (Health Alliance Plan) does offer PPO plans.

The chat window includes a "Send" button and a "Type your response..." input field.



Call Summarization Tool

Upload Call Transcript

Displaying data for **November**.

November

Date	Call Subject	Additional Detail	Keywords	Transcript File
2023-11-13	Coverage	Hospital Bills	Health insurance, hospital stay, coverage.	transcript16.txt
2023-11-07	Claims	Claim Denial	Claim, denial, coding error.	transcript17.txt
2023-11-06	Renewal	Options	Employment change, health insurance options, COBRA.	transcript18.txt
2023-11-06	Coverage	Coverage	Medical procedure, coverage, eligibility.	transcript19.txt
2023-11-05	Coverage	Coverage	Preventive care, policy number, coverage.	transcript20.txt
2023-11-05	Claims	Billing	Hospital stay, billing, policy number.	transcript21.txt
2023-11-06	Authorization	Pre-authorization	Surgery, pre-authorization, policy number.	transcript22.txt
2023-11-06	Providers	Options	Health insurance, options, deductible.	transcript23.txt
2023-11-05	Coverage	Coverage	Health insurance, medical procedure, deductible.	transcript24.txt
2023-11-05	Renewal	Retirement	Retirement, health insurance options, Medicare.	transcript25.txt
2023-11-05	Coverage	Deductible	Specialist, deductible, consultation.	transcript26.txt
2023-11-05	Coverage	Coverage	Medical procedure, coverage, pre-authorization.	transcript27.txt
2023-11-05	Renewal	Plan Options	Health insurance, plan options, coverage.	transcript28.txt

Call Subject Trends for November

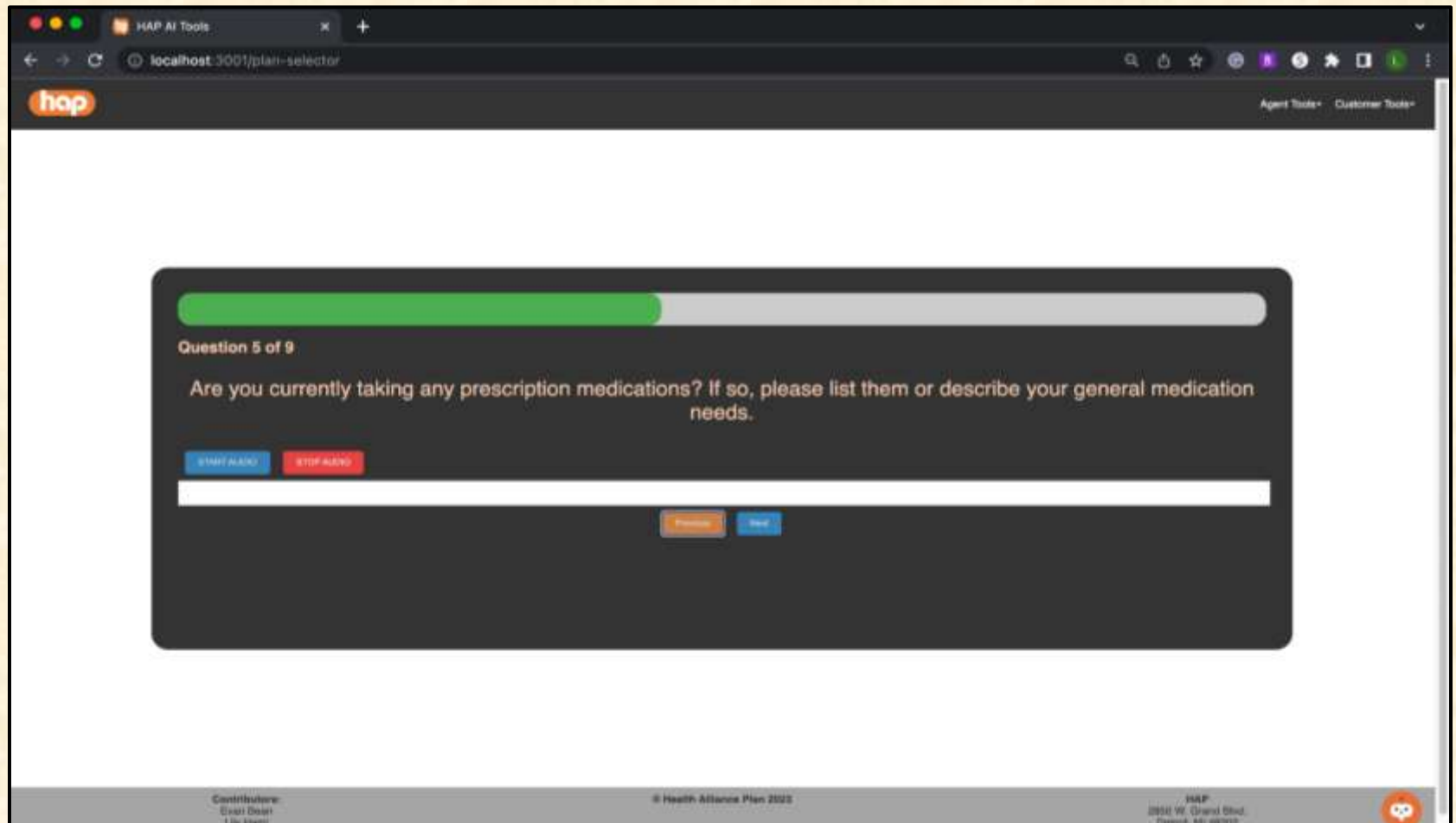
Category	Percentage
Updates	17.9%
Authorization	10.3%
Coverage	26.2%
Providers	15.4%
Claims	30.0%
Costs	9.1%

Additional Details for Call Subject Coverage

Category	Percentage
self-employed health insurance	9.1%
prescription coverage	9.1%
prescription drugs	18.2%
post-operative care	8.1%
coverage	36.4%
deductible	8.1%
hospital bills	9.1%



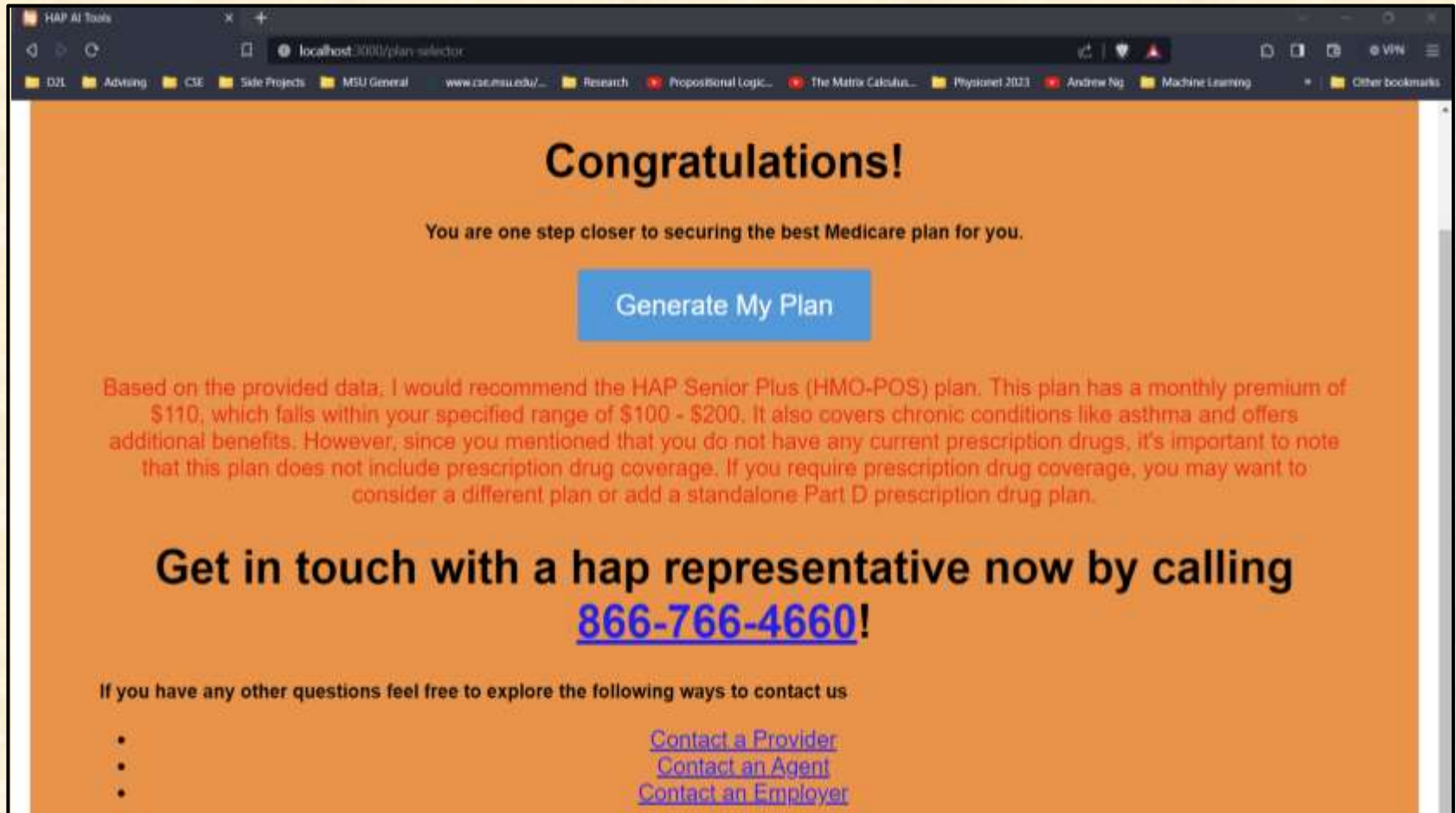
Plan Selector Quiz (1/2)



The screenshot shows a web browser window with the URL `localhost:3001/plan-selector`. The browser's address bar and tabs are visible at the top. The page content features a dark-themed quiz interface. At the top of the quiz is a progress bar with a green segment on the left. Below the progress bar, the text reads "Question 5 of 9". The main question text is "Are you currently taking any prescription medications? If so, please list them or describe your general medication needs." Below the question are two buttons: "START ALIAS" in blue and "STOP ALIAS" in red. A large white text input field is positioned below these buttons. At the bottom of the input field are two buttons: "Previous" in orange and "Next" in blue. The footer of the page contains three items: "Contributors: East Coast 1000000", "© Health Alliance Plan 2022", and "HAP 2001 W. Grand Blvd. Denver, CO 80202" next to a red circular logo with a white gear icon.



Plan Selector Quiz (2/2)



Congratulations!

You are one step closer to securing the best Medicare plan for you.

[Generate My Plan](#)

Based on the provided data, I would recommend the HAP Senior Plus (HMO-POS) plan. This plan has a monthly premium of \$110, which falls within your specified range of \$100 - \$200. It also covers chronic conditions like asthma and offers additional benefits. However, since you mentioned that you do not have any current prescription drugs, it's important to note that this plan does not include prescription drug coverage. If you require prescription drug coverage, you may want to consider a different plan or add a standalone Part D prescription drug plan.

Get in touch with a hap representative now by calling
[866-766-4660!](tel:866-766-4660)

If you have any other questions feel free to explore the following ways to contact us

- [Contact a Provider](#)
- [Contact an Agent](#)
- [Contact an Employer](#)



What's left to do?

- Stretch Goals
 - Additional pie chart to visualize calls by day
- Other Tasks
 - Update UI in accordance with HAP style guide



Questions?

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