

Project proposal
EN842300 Interactive Web Programming Project

Project name: Ai Medical Chat Bot

ชื่อโครงการ: Ai Medical Chat Bot

Contest topic: Web application

Development team

Team Members

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Ai Medical Chat Bot

1. Motivation

Many people, especially older adults and those living far from hospitals, face significant challenges in accessing quick healthcare guidance. Common problems include difficulty explaining symptoms clearly to healthcare providers, long waiting times for medical consultations, limited access to healthcare in remote areas, anxiety about whether symptoms require immediate medical attention. This project develops a medical AI Chatbot that provides preliminary symptom analysis through multiple input methods (text, voice, and images), making healthcare information more accessible and reducing anxiety for users seeking initial medical guidance.

2. Related work

1. <https://www.bangkokhospital.com/th/ratchasima/doctor/kamolchanok-bangpoophamorn-m-d>

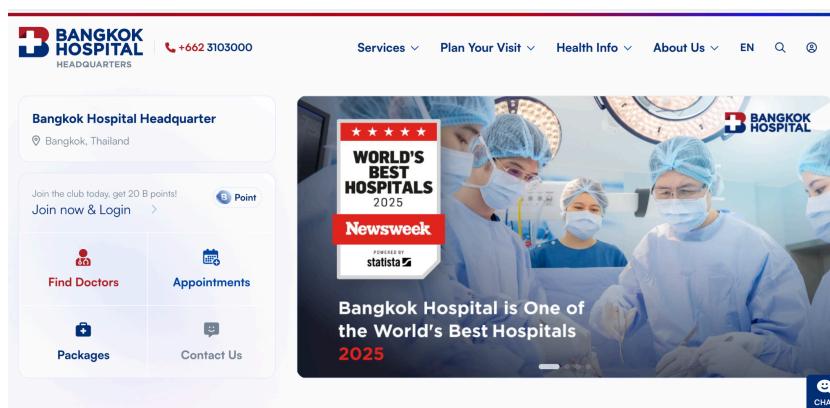


Figure1. bangkokhospital

2. <https://www.uhurgencare.org/services/visit-options/urgent-care>

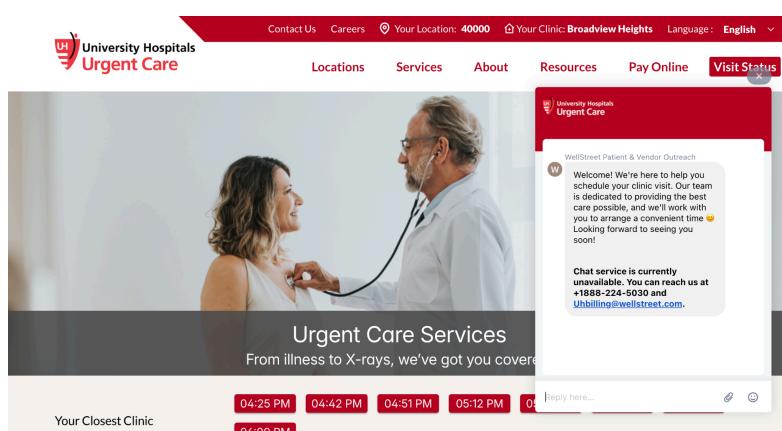


Figure2. Uhurgencare

3. <https://looloohhealth.com/presscribe%20->



Figure3. Uhurgentcare

3. Objectives

- Build a web-based AI chatbot that analyzes basic medical symptoms using text, voice, and image inputs
- Provide preliminary health guidance using AI (GPT-4 with medical prompts)
- Display results in simple, understandable language
- Create an accessible interface for users of all ages
- Ensure 24/7 availability for preliminary symptom checking

4. Scope

1. Web-based popup chatbot integrated into a hospital website
2. Text-based symptom input and analysis
3. Basic image upload for visual symptoms
4. AI-powered preliminary symptom analysis
5. Simple, user-friendly interface design

5. Tools & Technology

Frontend: HTML, JavaScript (with popup chatbot)

Backend: Python Flask or Node.js

AI: Med-Gemma, Google Cloud Vision, GPT-4

Messaging: LINE Messaging API

Storage: Firebase or AWS S3

Voice Input: Web Speech API

Figma: Ux/Ui

6. UX Development

1. User Flowchart

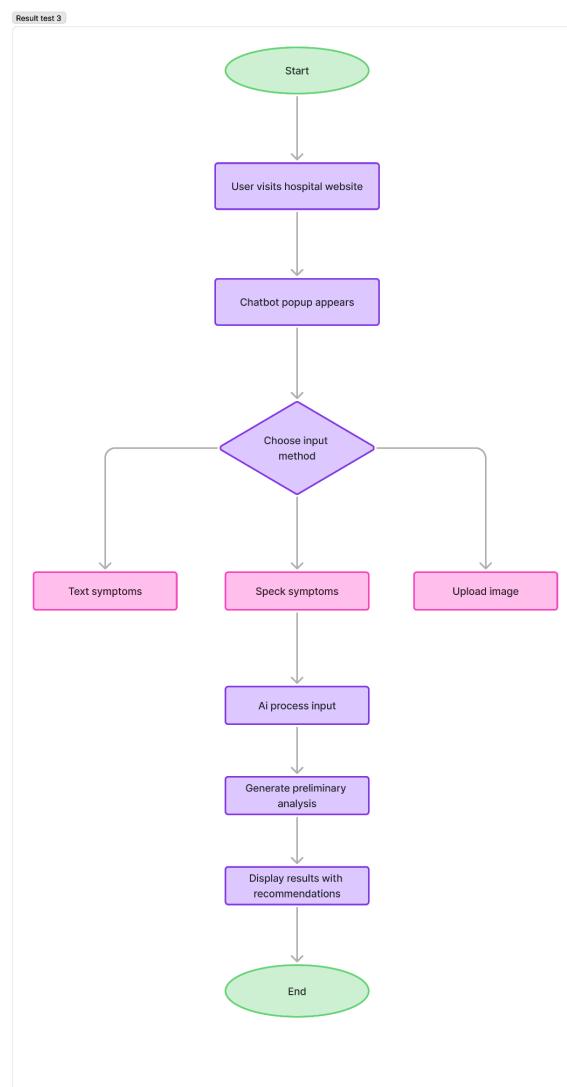
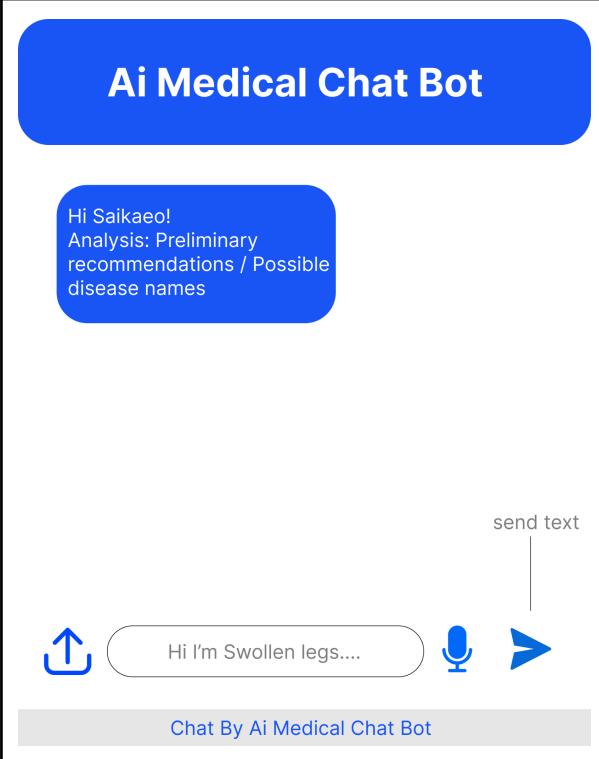
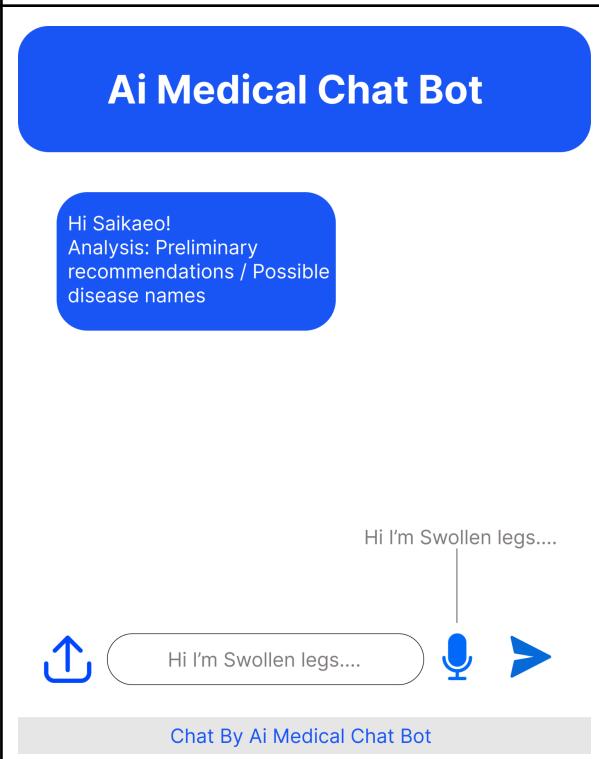


Figure4. Flowchart

2. Software structure (Design)

 <p>Ai Medical Chat Bot</p> <p>Hi Saikaeo! Analysis: Preliminary recommendations / Possible disease names</p> <p>send text</p> <p>Hi I'm Swollen legs....</p> <p>Chat By Ai Medical Chat Bot</p>	Pop-up Chatbot on the website
 <p>Ai Medical Chat Bot</p> <p>Hi Saikaeo! Analysis: Preliminary recommendations / Possible disease names</p> <p>Hi I'm Swollen legs....</p> <p>Chat By Ai Medical Chat Bot</p>	Type or speak your symptoms

Ai Medical Chat Bot

Hi Saikaeo!
Analysis: Preliminary
recommendations / Possible
disease names [Line](#)

Hi I'm Swollen legs



Upload images



[Chat By Ai Medical Chat Bot](#)

Ai Medical Chat Bot

Hi Saikaeo!
Analysis: Infection – Leg red
painful, hot, fever [Line](#)

Ok I'm Done



[Chat By Ai Medical Chat Bot](#)

Upload images of skin conditions

Share information to LINE

3.Prototype: [link here!!](#)

7. Methodology

1. Techniques and technologies for development

- Requirement Analysis – Define chatbot features and AI integration
- System Design – Plan architecture and data flow
- Frontend Development – Build chatbot UI
- Backend Development – Connect to AI models
- AI Mock Integration – Simulate Med-Gemma API

2. API Gateway

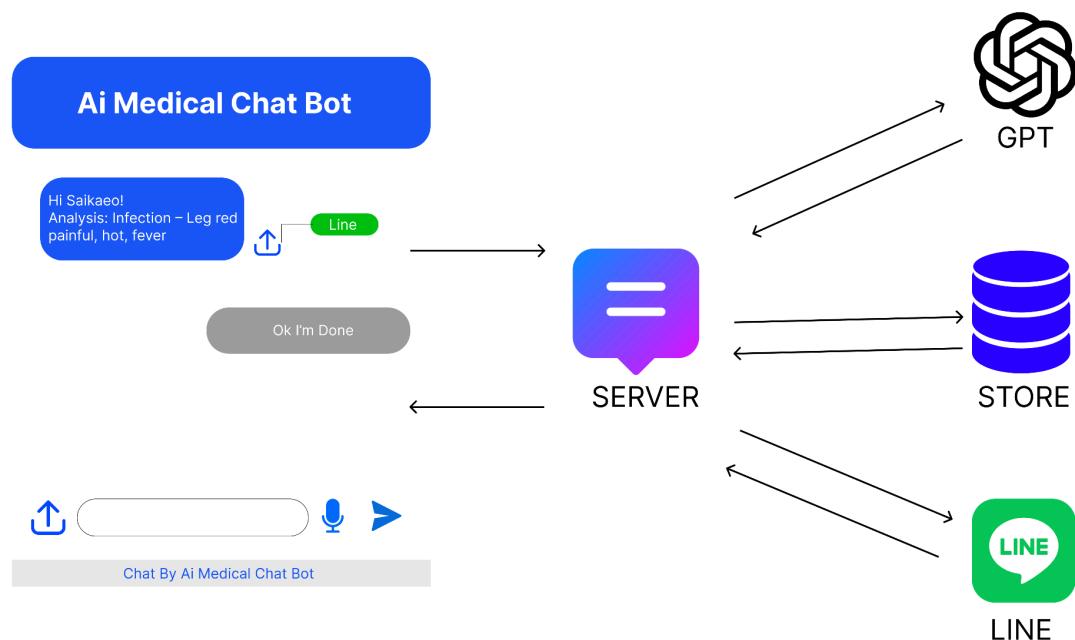


Figure5. API Gateway

3. Function

- Pop-up Chatbot on the website
- Type or speak your symptoms
- Upload images of skin conditions
- Receive preliminary analysis from AI
- Share information to LINE

Software Architecture:

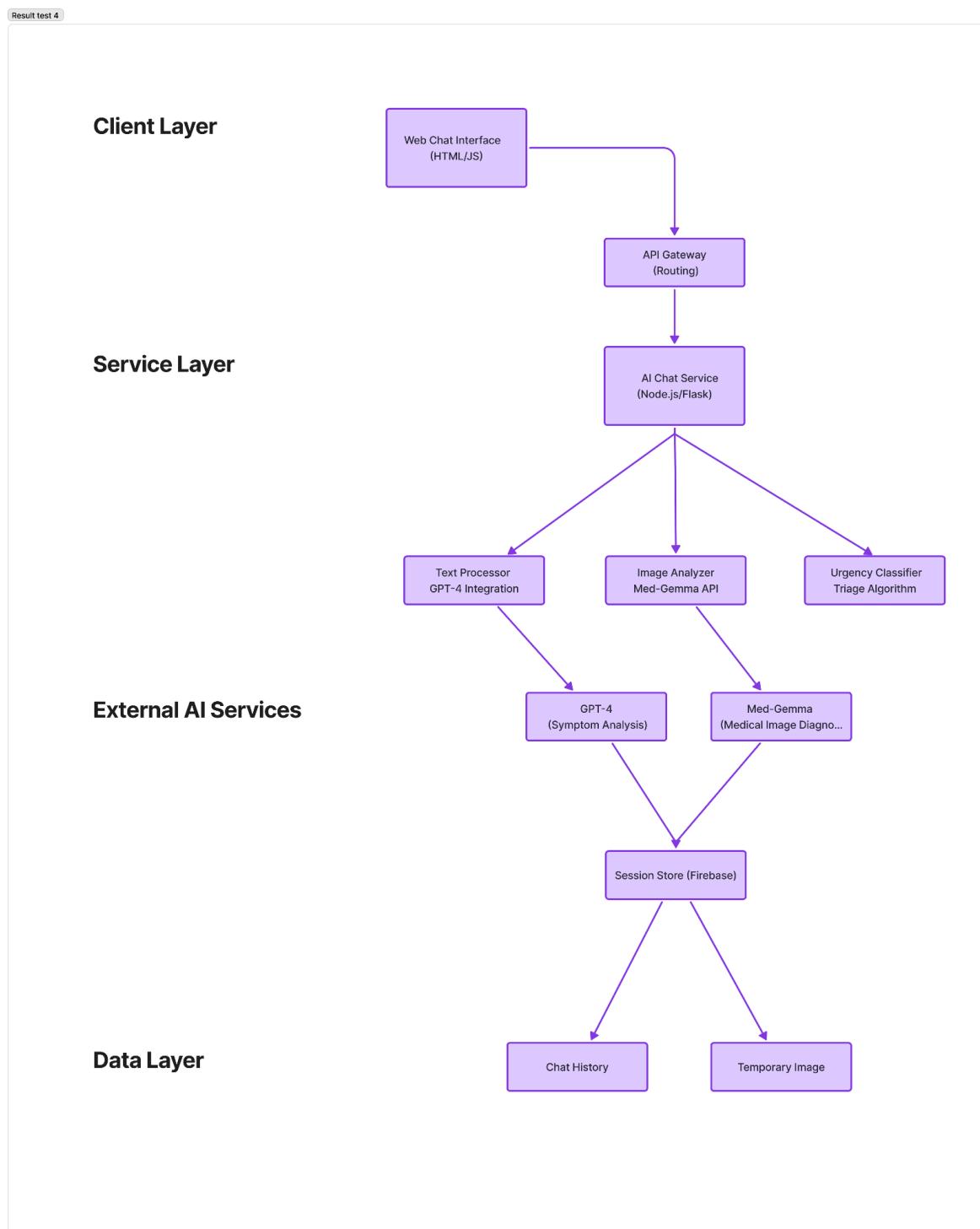


Figure6. Software Architecture

8. Timeline:

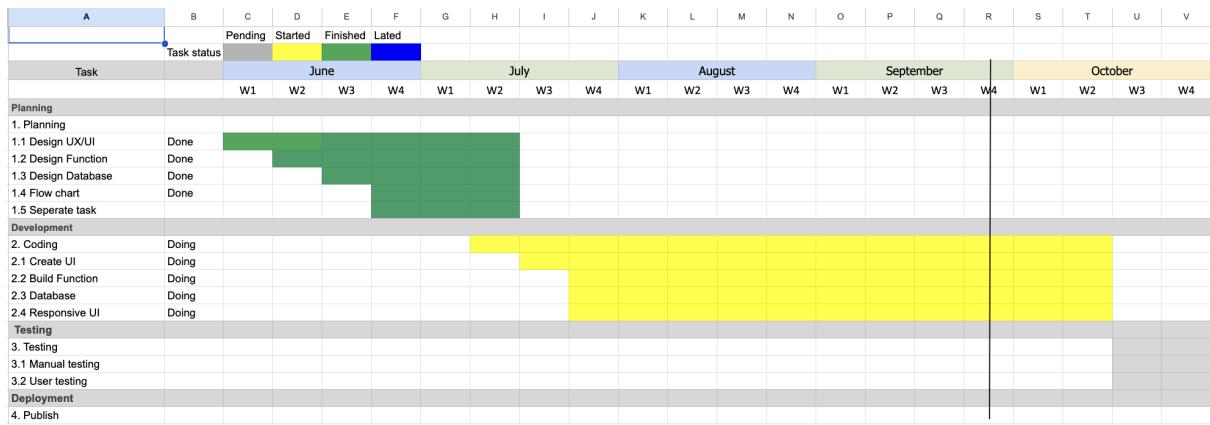


Figure7. Timeline_Ai Medical Chat Bot

Timeline link: [click here!!](#)

9. Conclusions

This AI Medical Chat Bot project creates a practical solution for improving healthcare accessibility through technology. By focusing on core functionality—accurate symptom analysis and user-friendly interfaces—the system will provide genuine value to users seeking preliminary medical guidance. The project prioritizes realistic, achievable goals within the course timeline while maintaining high technical standards. Users will benefit from immediate access to AI-powered health information, reducing anxiety and providing educational value about their symptoms. The multimodal approach ensures accessibility for diverse user groups, while the web-based implementation eliminates barriers like app downloads or complex registrations.

References

-OpenAI GPT-4 documentation

<https://platform.openai.com/docs>

-Google Research: Med-Gemma – Multimodal medical vision-language model

<https://ai.googleblog.com>

-Bangkok Hospital – Doctor Profile: Dr. Kamolchanok Bangpoophamorn

<https://www.bangkokhospital.com/th/ratchasima/doctor/kamolchanok-bangpoophamorn-m-d>

-Urgent care and telehealth services overview

<https://www.uhurgencare.org/services/visit-options/urgent-care>