

Medbot

Medical AI Chatbot

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Cohort: DS & AI 8

Project Idea & Rationale

Problem Statement

Many people struggle with accessing reliable medical information online.

Solution

A chatbot that provides accurate medical responses using AI and NLP.

Objective

Enhance accessibility, accuracy, and efficiency in healthcare information retrieval.

System Workflow

Input Processing

User query (any language) → Language detection & translation

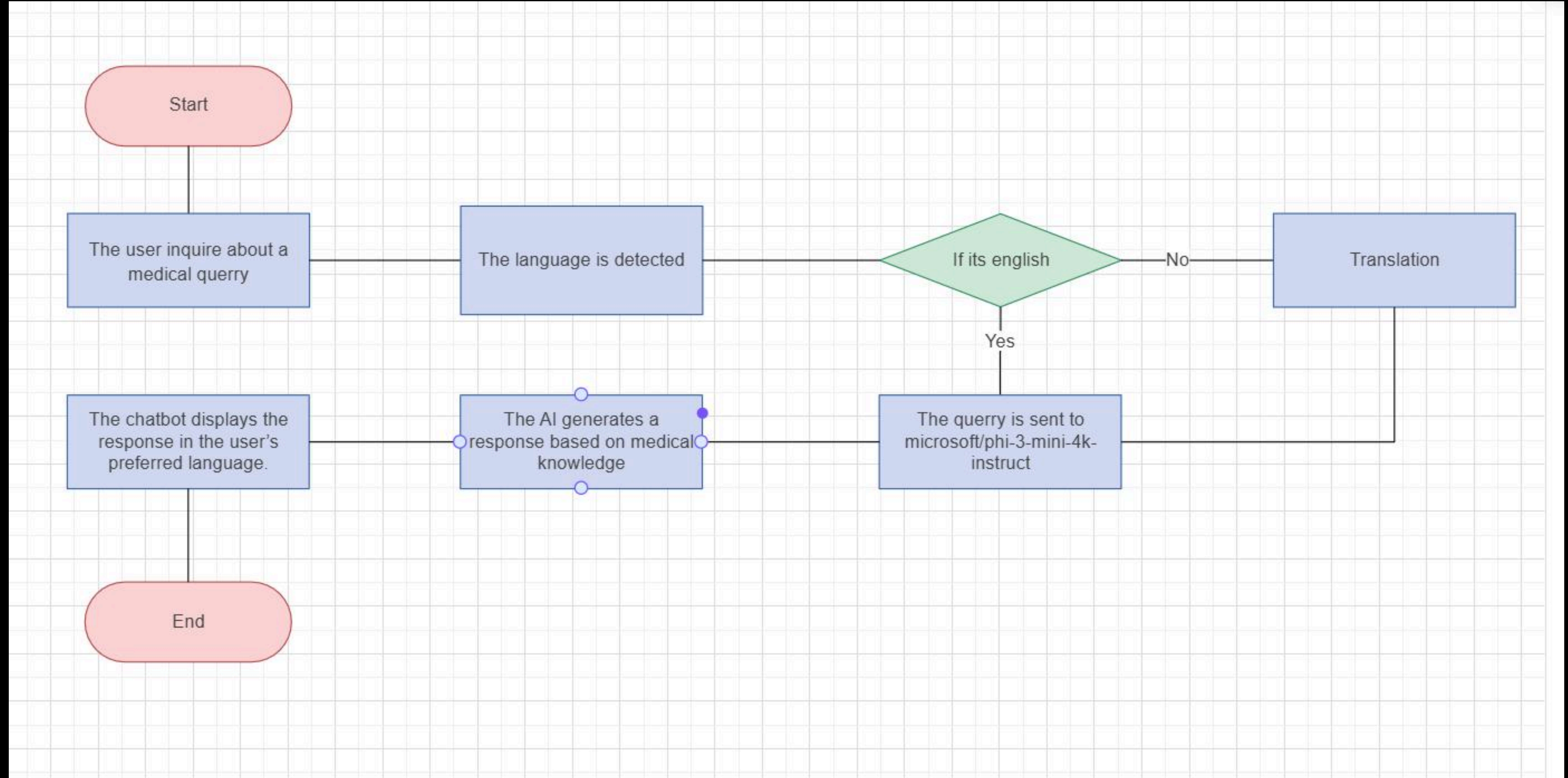
Model Processing

AI generates a medical response

Output

Response displayed in user's preferred language

Workflow



Technical Details

Model Used

microsoft/phi-3-mini-4k-instruct

Frameworks

**Hugging Face
Transformers,
Torch,
Langdetect,
Translate**

Deployment

**Gradio-based
user interface**

Challenges and Solutions

Ensuring factual accuracy

System prompts & structured model responses

Language Barriers

Auto-translation using langdetect and translate

Computational Efficiency

Leveraged GPU acceleration

Project Outcomes

- Successfully built a functional medical chatbot
- Implemented multilingual support
- Optimized for performance and factual accuracy
- Improved accessibility for global users

Future Enhancements

Knowledge Verification

Integration with verified medical databases

Response Accuracy

Enhancing response accuracy with RAG (Retrieval-Augmented Generation)

Deployment

Deploying as a full-scale web application

Thank you!

You can access the model at <https://github.com/noor-yumna/medbot>

For feedback, feel free to reach out at yumnanoor15@gmail.com