**Medical Chatbot with Retrieval-Augmented Generation (RAG)**

**MSDS692 – Data Science Practicum II**  
Weekly Progress Reports  
**Jonish Bishwakarma**

**Week 7 – Chatbot Interface**

**Planned Work for the Week**

Create a simple chatbot interface for demonstration.

**Project Timeline**

* Week 1 – Project definition and proposal submission (DONE)
* Week 2 – Proposal revision and evaluation design (DONE)
* Week 3 – Collect medical documents and build knowledge base (DONE)
* Week 4 – Implement retrieval pipeline and integrate with LLM (DONE)
* Week 5 – Develop evaluation script and run baseline testing (DONE)
* Week 6 – Debugging and refinement (DONE)
* Week 7 – Build chatbot interface (DONE)
* Week 8 – Final evaluation, analysis, and presentation

**Progress for the Week**

* Built Flask app (app.py) serving an HTML/CSS frontend.
* Integrated form to send user input to /get endpoint.
* Connected backend to RAG pipeline.
* Implemented fallback: if no relevant docs, chatbot replies “I don’t know based on the provided document.”
* Confirmed end-to-end functionality: user asks → retriever fetches → model answers.

**Roadblocks/Issues**

Minor errors with similar search and context concatenation but resolved.

**Plan for Next Week**

Finalize evaluation, prepare presentation, and complete final report.

**Resources for the Week**

* Guha, M. (2007). *The Gale Encyclopedia of Medicine (3rd edition).* Detroit: Thomson Gale.
* Ishaq101. (n.d.). *Simple AI Chatbot UI Design* [GitHub Repository]. <https://github.com/Ishaq101/Simple-AI-Chatbot>‌