

SE4010 - Current Trends in Software Engineering

Assignment 2 - AI/ML (Semester 1, 2025)

LLM Development Toolkit: Building a CTSE Lecture Notes Chatbot

Objective

Develop a simple chatbot using an LLM to answer questions based on CTSE lecture notes. The chatbot should be implemented inside a **Jupyter Notebook**. Students must also submit a justification report and a short demonstration video.

Deliverables

- Jupyter Notebook (.ipynb)
- Report (PDF)
- Video Demonstration (2–3 minutes)

Report Structure

- Introduction
- Justification of LLM Choice
- Justification of Development Approach System Design (optional diagram)
- Challenges and Lessons Learned
- Use of GenAI Tools (Prompts and Outputs)

- Conclusion
- References (if applicable)

Resources

Refer <https://python.langchain.com/docs/tutorials/rag/> as a resource.

Important Notes

- Students may use GenAI tools for assistance but must provide prompts and outputs.
- Focus on functionality, clarity of explanation, and transparency.
- Plagiarism or hiding GenAI use will lead to penalties.

Marking Scheme

Criteria	Marks
Working Jupyter Notebook Chatbot	40%
Justification of LLM Choice	20%
Justification of Development Approach	20%
Transparency of GenAI Prompts Used	10%
Video Demonstration	10%