Leos of SriLanka & Maldives
INSPIRING LIVES

Agent X

Project Guideline

ZONE24x7

Leo Club of University of Moratuwa

Project Title

Automated Restaurant Feedback Agent – SteamNoodles

Background

SteamNoodles is a rapidly growing restaurant chain known for its innovative approach to customer experience.

They collect feedback through their website, where customers leave reviews about food, service, and ambiance.

Currently, the restaurant uses simple sentiment analysis and displays results as charts and graphs. However, there's a clear opportunity to automate and personalize this process using modern AI techniques.

The analytics team proposed building two AI agents to enhance the customer feedback process:

- **Feedback Response Agent** – Automatically responds to customer reviews using sentiment analysis.

- **Sentiment Plotting Agent** – Generates visualizations of sentiment trends across a selected date range based on user prompts.

Objective

Design and implement a multi-agent framework using LlamaIndex or LangChain to perform the following:

Agent 1: **Customer Feedback Response Agent**

- Accepts individual customer feedback text as input.
- Uses an LLM to determine the sentiment (positive/negative/neutral).
- Generates a short, polite, and context-aware automated reply.

Agent 2: **Sentiment Visualization Agent**

- Takes a date range as input (e.g., “last 7 days” or “June 1 to June 15”).
- Generates a bar or line plot showing how many positive, negative, and neutral reviews were received each day.
- Output must be generated dynamically based on data and user prompt.

Tools & Technologies

Frameworks (Choose One):

- LangChain
- LlamaIndex

You May Also Use:

- LLM Services: OpenAI GPT, HuggingFace Transformers
- Python Libraries: pandas, matplotlib, seaborn, plotly
- Dataset: Kaggle restaurant review dataset (with text, sentiment, and timestamp)
- Platform: Python script or Jupyter Notebook

Expected Deliverables

Working Source Code

- All files required to run both agents
- Must be clearly structured and readable

README File

- Setup instructions
- How to test each agent
- Sample prompts and expected outputs

Demo Output

- Auto-response for at least one sample feedback
- One plot image showing sentiment variation over a time period

Submission Method (GitHub)

1. Create a public GitHub repository titled:
   steamnoodles-feedback-agent-[your-name]

2. Upload:

   - Your code and dependencies
   - Sample data or Kaggle dataset link
   - README with instructions
   - Output plots or demo video

3. In your README, include:

   - Your Name, University, Year
   - Summary of your approach
   - Instructions to test both agents

4. Submit your GitHub repo link via the Google Form (link will be shared soon)

Deadline: August 15, 2025 – 11:59 PM

🔴 **Late submissions will not be accepted**

Evaluation Criteria

Criteria	Weight
Functionality of both agents	40%
Use of LLMs + Sentiment logic	25%
Code quality & documentation	20%
Innovation & improvements	15%

Timeline & Deadlines

Kickoff Date: August 2, 2025

Submission Deadline: August 15, 2025 – 11:59 PM

Support and Communication

Contact Persons:

Sudil Minthaka

📧 sudilminthaka8797@gmail.com
📱 071-3568246

Mathisha Akash

📧 mathishaakash16@gmail.com
📱 075-363 3740

Final Notes

- This is an individual project.
- All GitHub repositories must be public.
- Submissions via Google Form only.
- Only submissions made on time will be evaluated.
- Don’t hesitate to reach out for any clarification.