SARASWATHULA SAI YASWANTH

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SUMMARY

Motivated Computer Science engineer with hands-on experience in AI-driven software development and Large Language Model (LLM) integration. Skilled in Python, with a strong foundation in reinforcement learning, LLMs and prompt engineering. Currently contributing to an AI-based test case generation project at DRDL, working with cutting-edge models like LLaMA 3 and GPT-OSS Models on HPC environments. Passionate about building scalable, intelligent solutions that bridge software engineering and applied machine learning.

EDUCATION

USHA RAMA COLLEGE OF ENGINEERING AND TECHNOLOGY Telaprolu, AP
Bachelor of Technology in Computer Science and Engineering May 2025
Cumulative GPA: 7.4/10

TECHNICAL SKILLS

- **Programming Languages:** Python, C, C++
- **Frameworks:** LangChain, Flask/FastAPI (basic), Docker.
- **AI & Machine Learning:** Large Language Models (LLaMA 3.x, MoE, GPT-OSS, etc.), Hugging Face, TensorFlow, Reinforcement Learning, Prompt Engineering, Model Fine-Tuning.
- **Data & Infrastructure:** High-Performance Computing (HPC), Data Pre-Processing (Rigorous cleaning of large complex defence documents).
- **Tools & Environments:** Git, VS Code, Postman, Linux, Jupyter.
- **Core Concepts:** Software Testing Automation, NLP, Context Retrieval, Document Understanding, Model Evaluation.

EXPERIENCE

Defence Research and Development Laboratory (DRDL), Hyderabad
Deputed by RTQMS | June 2025 – Present
Project: AI-Driven Test Case Generation System

- Developing an AI-powered solution to automate test case generation from diverse software documents, including SRS, SDD, SysRS, and test plans.
- Experimented with and fine-tuned **multiple open-source LLMs** such as GPT-OSS(20B/120B), **LLaMA Maverick MoE**, **LLaMA 3.2 90B Vision**, and **LLaMA 3.3 70B**, optimizing their performance for structured document comprehension.
- Conducting **fine-tuning and inference** on **High-Performance Computing (HPC)** clusters to enhance model accuracy and scalability.
- Applying **prompt engineering**, context optimization, and dataset curation techniques for automation workflows.
- Collaborating with AI engineers and software teams to design, evaluate, and deploy **LLM-driven testing pipelines**, improving reliability and reducing manual validation time.

PROJECTS

REINFORCEMENT LEARNING AGENT

- **Description**: Spearheaded a collaborative effort to design and present a robust framework for developing efficient Reinforcement Learning agents.
- **Technologies Used**: Python, TensorFlow, OpenAI Gym.
- **Key Contributions**:
  - **Designed, developed, and implemented** advanced RL algorithms to train and evaluate agents, achieving a 15% improvement in training efficiency and agent performance.
  - **Collaborated with a team** to optimize the learning environment in OpenAI Gym, enhancing simulation realism and improving training accuracy by 20%.

CERTIFICATIONS

1. Artificial Intelligence and Machine Learning Virtual Internship – AICTE
2. Software Engineering and Agile Software Development -- Infosys Springboard

ACHIEVEMENTS AND EXTRACURRICULAR ACTIVITIES

- **Elected as Class Representative** for a semester, successfully mediating between faculty and 60+ students, coordinating academic activities, and fostering a 15% increase in student engagement.
- **Led a team of 5 in an Ideathon,** presenting an innovative idea for building efficient Reinforcement Learning (RL) agents, earning recognition for leadership, creativity, and technical expertise.