Shagoto Rahman

• Irvine, CA-92617 • shagotor@uci.edu • 949-233-4120

Highly motivated Computer Science PhD student at UC Irvine with a strong focus on Large Language Models (LLMs) and multimodal AI systems. Seeking an internship to contribute to innovative research and development in NLP and AI. Proficient in Python and deep learning frameworks, problem-solving capabilities, with a proven track record in advancing efficient NLP mechanisms, LLM fine-tuning and optimizing AI applications.

Education

University of California, Irvine Irvine, CA
PhD in Computer Science. 2023 – 2029, GPA:3.96/4.00

University of California, Irvine Irvine, CA
M.Sc. in Computer Science. 2023 – 2025, GPA:3.96/4.00

Relevant Coursework: Machine Learning, Introduction to Artificial Intelligence, Systems and ML, AI in BIO and MED, Brain Inspired Learning System, Computer and Systems Security, Introduction to Embedded Systems, Modern Computer Systems, Light and Geometry in Vision.

Research Experience

University of California, Irvine Irvine, CA
Graduate Research Student 09/2023 - Present

- Authored **"Summary the Savior: Harmful Keyword and Query-based Summarization for LLM Jailbreak Defense"** and Conducted semantic and linguistic analysis integrated with Fine-tuned Large Language Models (LLMs) to defend against jailbreak attempts.
- Authored **"Prompter Says: A Natural Language Processing Approach to Jailbreak Detection in Large Language Models".**
- Fine-tuned LLMs for multi-intent detection in nicotine replacement therapy applications, improving intent classification accuracy.
- Performed parameter-efficient fine-tuning analyses using methods such as LoRa, QLoRa, and gradient accumulation in commodity GPUs to optimize computational efficiency.
- Designed and implemented dynamic channel slimming and early exit mechanisms leveraging contrastive learning to enhance model performance and efficiency.
- Conducted comprehensive analyses and optimizations of Texera's core components, including Java User Defined Functions (UDFs), runtime code compilation, the Boxplot operator, CSV file scanning across operating systems, and the Parts-Of-Speech Java operator, enhancing performance and functionality in data workflows.

Work Experience

Paul Merage School of Business, University of California, Irvine Irvine, CA
Graduate Research Student (Summer 2025) 07/2025 – 09/2025

- Awarded **"Chao Family Comprehensive Cancer Center (CFCCC) Pilot Awards", supported by the Anti-Cancer Challenge – 2024.**
- Authored **"Enhancing Intent Detection in Nicotine Replacement Therapy Tweets Using LLM: A Fine-Tuning Framework with Class Down sampling and Misclassification Refinement".**
- Explored LLM Fine-tuning, web development, APIs, automation, database handling, model deployment, and code testing.

University of California, Irvine Irvine, CA
Teaching Assistant 09/2023 - Present

- Conducted lectures and labs in Python Programming and Libraries and Intermediate Programming.
- Worked and assisted students to learn the intermediate programming skills.

Skills & Interests

Technical: Python, C++, Java, C#, MATLAB, PHP, JavaScript, PyTorch, TensorFlow, PEFT, LoRa, QLoRa, OpenCV.
Language: English, Bengali, Hindi. **Interests:** Gaming, Cricket, Football, Videography, Photography