

Shamit Fatin

+8801842227053 | shamit187@gmail.com | https://shamit187.github.io/ | Shamit187 | Shamit Fatin

Personal Profile

A research assistant at BUET CSE, currently working on Android automated testing in collaboration with Samsung. Aspires to advance research in memory, kernel, and scalable and cheap ML systems.

Education

Bangladesh University of Engineering and Technology

Dhaka, Bangladesh

BSc in Computer Science and Engineering (*Honours*)

April 2019 - July 2024

- Department of Computer Science and Engineering
- CGPA: 3.9

Research Experience

COMPASS: Eliciting Geo-Spatial Reasoning in Large Language Models for Popular Path

Problem

Manuscript to be submitted in ACL 2025

- Contribution:** Proposed leveraging LLMs for complex geo-spatial reasoning tasks, implemented diverse prompting strategies, and conducted experiments with GPT-4 and LLaMA3 8B, showcasing LLMs' superiority over traditional methods. Authored the manuscript highlighting the framework's flexibility and efficiency.
- Advisor:** Mohammed Eunus Ali
- Collaborator:** Md Rizwan Parvez

LELANTE: LEveraging LLM for Automated ANDroid TESTING

Manuscript

- Contribution:** Designed and implemented the LELANTE framework integrating language and vision models for automated Android app testing, achieving a 85% success rate. Authored the manuscript as the first author.
- Co-author:** HAZ Sameen Shahgir
- Mentor:** Anindya Iqbal

Linux CXL Driver Analysis

Ongoing Project

- Contribution:** Fuzzing the Linux CXL driver to identify bugs, addressing potential issues, and exploring novel improvement areas. Actively engaging in research discussions and implementing advanced fuzzing techniques.
- Mentor:** Tanvir Ahmed Khan

Work Experience

Bangladesh University of Engineering and Technology

Dhaka, Bangladesh

Research Assistant

Feb 2024 - Dec 2024

- Led the development of an execution module for automating Android test cases using fine-tuned smaller LLMs, achieving 90% accuracy through LoRA and full fine-tuning techniques.
- Designed and implemented a retrieval-augmented generation (RAG) pipeline, automating 87% of Samsung-provided test cases.
- Worked with android kernel and wrote ADB scripts to improve app state manipulation and testing efficiency.
- Integrated an end-to-end LLM-based automation pipeline into a GUI application for deployment in Samsung's testing department.
- Supervised dataset creation, collecting and managing over 4,000 datapoints for model fine-tuning.

Bangladesh University of Engineering and Technology

Dhaka, Bangladesh

ML Engineer

Feb 2025 - Present

- Automating VLSI code using Language Model
- Automating Web Testing using Language Model