

Laboni Sarker

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EDUCATION

Ph.D. Candidate in Computer Science

Expected January 2026

University of California, Santa Barbara (UCSB)

CGPA: 3.93/4.0

- Research Focus: Software security and testing.
- Relevant courses: Software Fuzzing, System security, Vulnerability Analysis.

B.Sc.Engg. in Computer Science and Engineering

July 2014 - October 2018

Bangladesh University of Engineering and Technology (BUET), Dhaka

CGPA: 3.89/4.0

- Ranked 12th among a class of 126 students.

RELEVANT EXPERIENCES

Graduate Student Researcher | Verification Lab, University of California, Santa Barbara

June 2021 - Present

- Evaluation of LLM generated codes: Focused on evaluating the impact of syntactically different but semantically equivalent prompts on code generation and developing methods to enhance the robustness and consistency of large language models (LLMs) in this context.
- Security Patch Evaluation: Evaluated and analyzed code versions post-patching to assess the functional and security impact, quantifying patch effectiveness in mitigating vulnerabilities while preserving original functionality.
- Darpa HARDEN project: Contributed to testing and analyzing UEFI firmware vulnerabilities.

Cybersecurity Intern | Motional

June 2022 - September 2022

- Developed **45%** fuzz harnesses for testing and achieved **92%** of line coverage on average.
- Identified **2** vulnerabilities of undefined behaviors in the C++ codebase.
- Research Article: Technically Speaking : How continuous fuzzing secures software while increasing developer productivity

PUBLICATIONS

- Hybrid Equivalence/Non-equivalence testing. (ICST 2025) [Link](#)
- STASE: Static Analysis Guided Symbolic Execution for UEFI Vulnerability Signature Generation. (ASE 2024) [Link](#)
- Rare Path Guided Fuzzing. (ISSTA 2023) [Link](#)
- Quantitative Symbolic Non-Equivalence Analysis. (ASE 2024) [Link](#)
- Coeus: A System for Oblivious Document Ranking and Retrieval. (SOSP 2021) [Link](#)
- COVID-DenseNet: a deep learning architecture to detect COVID-19 from chest radiology images. (ICDSA 2022) [Link](#)

RESEARCH PROJECTS

- JIT-induced timing side-channel vulnerability analysis in Java, JavaScript, and C#.
- Efficient and secure keyword search in an end-to-end encrypted system on a single non-colluding server.

TECHNICAL SKILLS

- Programming Languages: Python, C, C++, Java, Assembly(80X86), JavaScript.
- Others: angr, klee, AFL++, LibFuzzer, ns2, Keras, PyTorch, Latex, Git, docker.

OTHER EXPERIENCES

Graduate Teaching Assistant | University of California, Santa Barbara

September 2020 - June 2022

Lecturer at Department of CSE | University of Asia Pacific

April 2019 - September 2020

Software Specialist | LEADS Corporation Limited

November 2018 - March 2019

Software Engineer Intern | REVE Systems

April 2018 - September 2018

ACHIEVEMENTS & LEADERSHIP

- Vice President of Technical Activities, Women in Computer Science (WiCS) UCSB, 2023-Present.
- Mentor in Early Research Program for undergraduates (ERSP), 2022-23.
- Grace Hopper Celebration Scholar, 2022(GHC), 2018(GHCI).
- Academic Excellence Fellowship for academic achievements, UCSB.