

Mustakimur Rahman Khandaker

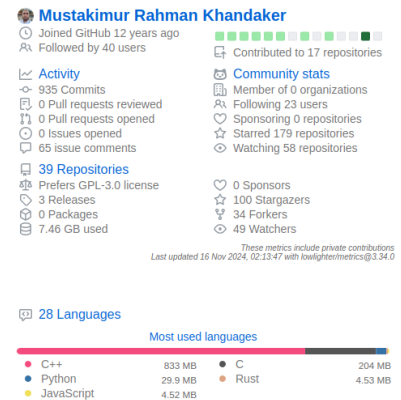
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Technical Skills

Programming - C/C++, Rust, Python, Java (Oracle Certified Associate Java Programmer), Android.
Compiler - Clang/LLVM, Static Value-Flow Analysis (SVF).
Program Analysis - AFL++, afl.rs, Intel pin, Triton, Unicorn.
Reverse Engineering - GDB, Radare2, Capstone, Ghidra, Binary Ninja, Cutter.
System - Linux Kernel, Docker, VM, Github, Intel SGX, Intel MPX, Intel TSX.

Open Source

COIN-Attacks:
github.com/mustakimur/COIN-Attacks
OS-CFI:
github.com/mustakimur/OS-CFI
CFI-LB:
github.com/mustakimur/CFI-LB
Compiler Workshop:
github.com/mustakimur/syssec-workshop
Rust Course Materials:
github.com/mustakimur/rust_classwork
UGA CTF Workshop:
github.com/mustakimur/UGA-CTF-Workshop



Appointments

<i>Assistant Professor - CyberSecurity</i> School of Computing University of Georgia Athens, Georgia, USA	Aug 2020 - Present
<i>Research Intern - Trustworthy System</i> Baidu USA Sunnyvale, California, USA	May 2019 - Aug 2019
<i>Graduate Assistant - System & Software Security</i> Florida State University Tallahassee, Florida, USA	Aug 2015 - Jun 2020
<i>Sr. Software Engineer - Android</i> Samsung Research & Development Institute, Bangladesh Dhaka, Bangladesh	Dec 2012 - Jun 2015

Education

Ph.D. in Computer Science
Department of Computer Science
Florida State University
Dissertation: Protecting Cyberspace: Vulnerability Discovery and Mitigation
Research Advisor: Dr. Zhi Wang
Aug 2015 - Jun, 2020

B.Sc. in Computer Science & Engineering Apr 2008 - Oct, 2012
Department of Computer Science & Engineering
Chittagong University of Engineering & Technology
Project: Location-based Early Disaster Warning and Evacuation System on Mobile Phones Using OpenStreetMap

Industry Projects

- **Arctecture Draw, Sketch, Paint** Oct 2014 - Jun 2015
 - Android application UI development: menu, canvas, tools, color picker, layer management, etc.
 - Layer creation, merging, and transformation.
 - Undo/Redo, save/load, and export features.
- **SPlanner Feature Development** Mar 2014 - May 2014
 - Drag and Drop Event Creation. SNote integration with stylus.
 - Event creation/revision/cancellation from Samsung Chat.
- **Fix Samsung PIMS Issue** Dec 2012 - Jun 2015
 - Resolved 500+ issues for Clocks, World Clock, Diary, Calculator, and Calendar.
 - Lead a team of 2 junior engineers including their training, work assignment, and code review.
- **New Hiring Workshop** Dec 2013 - Jun 2015
 - Conducted 15+ workshops on Android development, debugging, and testing.
 - Interviewed 20+ candidates for Android development positions.

Publications

- K Aldoshan, DB Stephens, **Mustakimur Khandaker**. “cmdFuzz: Fuzzing Stripped Firmware Applications with Command-line Arguments.” *Under Review*, 2025.
- DB Stephens, KH Lee, **Mustakimur Khandaker**. “RustLIVE: Reducing the Learning Barriers of Rust Through Visualization.” *Frontiers in Education (FIE)*, 2024.
- DB Stephens, K Aldoshan, **Mustakimur Khandaker**. “Understanding the Challenges in Detecting Vulnerabilities of Rust Applications.” *IEEE Secure Development Conference (SecDev)*, 2024.
- **Mustakimur Khandaker**. “Protecting Cyberspace: Vulnerability Discovery and Mitigation.” *PQDT-UK & Ireland.*, 2020.
- **Mustakimur Khandaker**, Yueqiang Cheng, Zhi Wang, and Tao Wei. “Enclave Analysis Framework for SGX Software Interface Attack” *25th ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, 2020. [[Open Source](#)] [[Artifact](#)]
- **Mustakimur Khandaker**, Wenqing Liu, Abu Naser, Zhi Wang, and Jie Yang. “Origin-sensitive Control Flow Integrity” *Proceedings of the 28th USENIX Security Symposium (USENIX Security)*, 2019. [[Open Source](#)]
- **Mustakimur Khandaker**, Abu Naser, Wenqing Liu, Zhi Wang, Yajin Zhou, and Yueqiang Cheng. “Adaptive Call-site Sensitive Control Flow Integrity” *Proceedings of the 4th IEEE European Symposium on Security and Privacy (EuroS&P)*, 2019. [[Open Source](#)] [[Best Paper Award](#)]

- Yue Chen, **Mustakimur Khandaker**, and Zhi Wang. “Secure in-cache Execution.” *International Symposium on Research in Attacks, Intrusions, and Defenses*. Springer, Cham, 2017.
- Yue Chen, **Mustakimur Khandaker**, and Zhi Wang. “Pinpointing Vulnerabilities.” *Proceedings of the 2017 ACM on Asia Conference on Computer and Communications Security*. ACM, 2017.
- **Mustakimur Khandaker**, Tauhidul Alam, and Mahfuzulhoq Chowdhury. “Location based Early Disaster Warning and Evacuation System on Mobile Phones Using OpenStreetMap.” *Open Systems (ICOS), 2012 IEEE Conference on*. IEEE, 2012.

Funding

- **Google Scholar Award:** “Comprehensive Visualization of Rust Policies: A Self-paced Learning and Vulnerability Understanding Tool”. 2023. **[Strong, Declined.]**
- **NSF-SaTC: CORE: Small:** “Towards Reality of Context-sensitive Control Flow Integrity”. 2022. **[Competitive, Declined.]**

Honors and Awards

- **Best Paper Award (2019):** IEEE European Symposium on Security and Privacy (EuroS&P).
- **Graduate Research Assistant Award (2019):** Department of Computer Science, Florida State University.
- **Graduate Teaching Assistant Award (2018):** Department of Computer Science, Florida State University.
- **Outstanding Teaching Assistant Nomination (2018):** Florida State University.

Teaching and Advising

Courses @ UGA

- CSCI 8245 - Secure Programming [Spring]
- CSCI 4250/6250 - CyberSecurity [Fall]
- CSCI 4760/6760 - Computer Networks [Spring]

Advising Students

- Kawkab Aldoshan, Ph.D., 2025
- Diane Stephens, Ph.D., 2024
- Cameron Piacentini, M.Sc.(CyberSecurity), 2025
- Karan Ranawat, M.Sc.(Thesis), 2023
- Sofiya Bagodiya, M.Sc.(Thesis), 2023
- Connor Flynn, M.Sc.(CyberSecurity), 2022

Services @ UGA

- Organizer, *UGA CTF Workshop* 2021 - 2022
- Core Faculty, *Institute for Cybersecurity & Privacy* 2020 - Present
- Faculty Advisor, *UGA Cybersecurity Club* 2021 - 2022
- Faculty Member, *Graduate Admission Committee, SoC, UGA* 2021 - 2023
- Faculty Member, *Graduate Curriculum Committee, SoC, UGA* 2022 - Present

External Services

Journal Reviewer

- IEEE Transactions on Computers (TC-CS)
- IEEE Transactions on Dependable and Secure Computing (TDSC-CS)

Program Committee

- Annual Computer Security Applications Conference (ACSAC), 2022.
- The International Workshop on Security, Privacy, and Trust for Emergency Events, 2020.
- IEEE Symposium on Security and Privacy, 2019. [Shadow PC]

References

*Dr. Gagan Agrawal
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*Dr. David Whalley
Professor & PhD Committee Member
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*Dr. Roberto Perdisci
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*Jewel Nandy
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