

Muhammad Ibrahim

ibrahim.gr88@gmail.com • fr0stm0urne.github.io

EDUCATION

Purdue University, West Lafayette

August 2019 - Present

PhD, Computer Science

Relevant Courses: Software/Information/Mobile Security, Software Engineering, Data Mining

LUMS School of Sciences & Engineering, Pakistan

July 2015 - June 2019

BS, Computer Science

Relevant Courses: Network Security, Distributed Systems, Software Engineering, Deep Learning

WORK EXPERIENCE

Google ASPIRE

November 2021 - Present

Research Intern, Mentored by Dr. Guliz Seray Tuncay

- Explored privacy concerns of mobile and smartwatch interaction
- Developed tool for detecting sensitive data leaks across mobile and smartwatch

Purdue University

August 2019 - Present

Research Assistant, Advised by Dr. Antonio Bianchi

- Performed high impact research on **mobile system security**
- Developed tools and techniques to scale and automate app analysis

LUMS School of Sciences & Engineering, Pakistan

August 2018 - June 2019

Teaching Assistant

- TA for CS-200, CS-100 - Introduction to Programming, Computational Problem Solving
- Supervised C++ programming labs and assignments for classes of over 200 students

National Center in Big Data and Cloud Computing, Pakistan

Summer 2018

Research Intern, Mentored by Dr. Naveed Arshad

- Applied data mining techniques for forecasting energy usage in Pakistan
- Developed **Android** apps for visualizing energy usage data of smart grids

CHISEL @ LUMS, Pakistan

Summer 2017

Research Intern, Mentored by Dr. Suleman Shahid

- Investigated UX design of AR/VR technologies and developed AR/VR **Android** apps
- Performed game developer user studies for improving game design frameworks

PUBLICATIONS

- **Muhammad Ibrahim**, Abdullah Imran, Antonio Bianchi. SafetyNOT: On the usage of the SafetyNet attestation API in Android. MobiSys 2021
- Abdullah Imran, Habiba Farrukh, **Muhammad Ibrahim**, Z. Berkay Celik, Antonio Bianchi. SARA: Secure Android Remote Authorization. USENIX Security 2022 Fall
- **Muhammad Ibrahim**, Andrea Continella, Antonio Bianchi. AoT - Attack on Things: A security analysis of IoT firmware updates. Euro S&P 2023
- Doguhan Yeke, **Muhammad Ibrahim**, Habiba Farrukh, Abdullah Imran, Antonio Bianchi, Gliz Seray Tuncay, Z. Berkay Celik. Wear's my Data? Understanding the Cross-Device Runtime Permission Model in Wearables. S&P 2024

TALKS AND PRESENTATIONS

- July 2023: Paper presentation at the 8th IEEE European Symposium on Security and Privacy (Delft, Netherlands)
- April 2023: Poster presentation at MITRE eCTF Award Ceremony (McLean, VA)
- October 2022: Speaker at Google ASPIRE Research Seminar (Virtual)
- July 2021: Paper presentation at the 19th ACM International Conference on Mobile Systems, Applications, and Services (Virtual)

ADDITIONAL SKILLS

- **Programming Languages:** Python, Java, C++, JavaScript, Rust
- **Software:** Linux, Google Cloud Platform, Ghidra, Unity, Frida, Android Studio
- **Spoken Languages:** English, Urdu, Punjabi, Hindi

PROFESSIONAL SERVICES

External Reviewer

- Research in Attacks, Intrusions and Defenses (RAID 2023)

Artifact Evaluation Committee

- EuroSys (2023)
- Workshop On Offensive Technologies (2023)

ENGAGEMENT, DIVERSITY, AND OUTREACH ACTIVITIES

CS Graduate Student Government, Purdue

- President (2023 - 2024)
- Social Activities Coordinator (2022 - 2023)

Science and Engineering Promotion Society, LUMS

- Event Head for national programming event (2016 - 2017)

AWARDS AND HONORS

- Google ASPIRE Award 2023
- European Security and Privacy Travel Grant 2023
- MITRE Embedded Capture The Flag Best Poster Award 2023
- Google ASPIRE Award 2022
- Google ASPIRE Award 2021
- Boxing Team (LUMS) Color Award 2018
- Science Promotion Society (LUMS) Immense Contribution Award 2017