Mohammad Ishtiaq Ashiq Khan

📞 (540) 449-8267   @ iashiq5@vt.edu   📍 Blacksburg, VA   🔗 Homepage   in LinkedIn   ⦿ GitHub

Experience

Graduate Research Assistant	**Virginia Tech**	**Jan 2021 - Present**

- Curating experiments, designing APIs, and analyzing big data to identify mismanagements and vulnerabilities in applications of Public Key Infrastructure, DNS, and E-mail.
- Have multiple publications in top security and measurement venues like USENIX Security, IMC, and PAM.

Lecturer	**United International University**	**Jul 2019 - Dec 2020**

- Taught Network Security, Data Structure, Object-Oriented Programming, etc. undergraduate courses.

Full Stack Software Engineer	**InfoSapex Limited**	**Nov 2018 - Jul 2019**

- Successfully released a Procurement Management System in production with over 50% contribution.
- Served as a technical point of contact with clients and carried out requirement analysis.
- Significantly reduced server provisioning time by automating configurations with Puppet and recovery time by setting up monitoring service with Munin and Nagios.

Software Engineer Intern	**Dingi Technologies Limited**	**Mar 2018 - Aug 2018**

- Developed an interactive website for addressing feedbacks and comments from users of Dingi's native mobile application.

Education

Blacksburg, VA	**Virginia Tech**	**Jan 2021 - Dec 2025 (Expected)**

- Ph.D. in Computer Science and Applications, CGPA: 3.85

Technical Experience

Selected Publications

- *You've Got Report: Measurement and Security Implications of DMARC Reporting* in **USENIX Security** 2023. Authors: **Md. Ishtiaq Ashiq**, Weitong Li, Tobias Fiebig, and Taejoong Chung.
- *Measuring TTL Violation of DNS Resolvers in the Wild* in **PAM** 2023. Authors: Protick Bhowmick, **Md. Ishtiaq Ashiq**, Casey Deccio, and Taejoong Chung.
- *Under the Hood of DANE Mismanagement in SMTP* in **USENIX Security** 2022. Authors: Hyeonmin Lee, **Md. Ishtiaq Ashiq**, Moritz Muller, Roland van Rijswijk-Deij, Taekyoung Kwon, and Taejoong Chung.

Projects

- **Revisiting the NXNS Attack** (2022). Developed a scalable technique to measure patches for the attack in local resolvers leveraging a proxy network, [details].
- **Transferability of Adversarial Training in Text Domain** (2021). Conducted a study to check transferability of adversarial training across popular adversarial frameworks. Framework: PyTorch, [Link].
- **DNSSEC Debugger** (2021). Analyzed historical DNSViz data to understand the challenges for DNS administrators while deploying and managing DNSSEC. Presented in **36th DNS-OARC Workshop**, [Link].

Languages and Technologies

Languages Python, Java, C++, C, JavaScript/ HTML/ CSS, Assembly (x86), familiar with R and Go
Frameworks Django Rest, Tensorflow, PySpark, PyTorch, Node.js, familiar with Android
DBMS Oracal SQL, PostgreSQL, MongoDB

Additional Experience and Awards

- **Instructor, Virginia Tech:** Taught Intermediate Software Design course during Summer 2023.
- **Open Source Contributions:** Contributed to 3 open-source projects: Mail-in-a-Box, iRedAPD, and TextAttack.
- Awarded *University Merit List Scholarship*, and *Dean's List Scholarship* during bachelor's.