

# Mohammad Ishtiaq Ashiq Khan

CS PhD STUDENT AT VIRGINIA TECH

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GitHub, LinkedIn, Google Scholar

Website: <https://ashiq5.pythonanywhere.com/>

## HIGHLIGHTS

- Have advanced knowledge of OOP, algorithms, data structures, computer networks, network security, and relational DBMS.
- Demonstrated strong teamwork skills in collaborative research and multiple team projects.
- Developed effective communication skills by interacting with students at different levels of expertise while being employed as a university lecturer.
- Contributed to two open source projects in TextAttack and Mail-in-a-Box.

## WORK EXPERIENCE

### Graduate Research Assistant, Virginia Tech

*Supervisor: Dr. Taejoong Chung*

- Currently focusing on how a data-driven approach can improve mismanagement and security of public key infrastructure (PKI).

### Lecturer at United International University, Dhaka, Bangladesh

*Department of CSE*

*Jul '19 - Jan '21*

- Taught Network Security, Artificial Intelligence Laboratory, Object Oriented Programming, etc.
- Supervised student projects

### Full Stack Software Engineer at InfoSapex Limited, Dhaka, Bangladesh

*Department of Design and Development*

*Nov '18 - Jul '19*

- Developed a Procurement Management System for both server-side and client-side
- Designed a large, normalized database connecting multiple modules
- Added an efficient real-time report generation system
- Managed the server-side configuration and deployment of the system
- Stack: Django Rest, JS, jQuery, HTML, CSS, Bootstrap, PostgreSQL, Celery

## EDUCATIONAL QUALIFICATION

**Virginia Tech**, Blacksburg, Virginia, USA

*Ph.D., Computer Science and Applications*

*Jan '21 - Dec '25 (Expected)*

**CGPA: 4.00/4.00 (Ongoing)**

**Bangladesh University of Engineering and Technology (BUET)**, Dhaka, Bangladesh

*Bachelor of Science, Computer Science and Engineering*

*Jul '14 - Oct '18*

**CGPA: 3.83/4.00**

## RESEARCH INTERESTS

Network Security and Measurement, Data Analysis, Machine Learning

## PUBLICATIONS

### Under the Hood of DANE Mismanagement in SMTP

*Supervisor : Dr. Taejoong Chung*

*Oct '20 - May '21*

*Authors: Hyeonmin Lee, Md. Ishtiaq Ashiq, Moritz Mller, Roland van Rijswijk-Deij, Taekyoung Ted Kwon, Taejoong Chung*

- Accepted in Proceedings of the USENIX Security Symposium 2022, Boston, MA, USA

## Measurement and Analysis of Automated Certificate Reissuance

*Supervisor : Dr. Taejoong Chung*

*May '20 - Nov '20*

*Authors:* Olamide Omolola, Richard Roberts, **Md. Ishtiaq Ashiq**, Taejoong Chung, Dave Levin, and Alan Mislove

- In Proceedings of the Passive and Active Measurement Conference (PAM), Virtual, Mar 2021

## Domain Flux based DGA Botnet Detection Using Feedforward Neural Network

*Supervisor : Dr. Md. Shohrab Hossain*

*Jan '18 - Jul '19*

*Authors:* **Md. Ishtiaq Ashiq**, Protick Bhowmick, Md. Shohrab Hossain, and Husnu S. Narman

- In IEEE Military Communications Conference (MILCOM), Norfolk, VA, USA, 2019

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## PROJECTS

### A Study on Adversarial Training: Is adversarial training transferable in the text domain?

*Supervisor : Dr. Bimal Viswanath*

*Mar '21 - Apr '21*

- Conducted an experiment to check AT transferability across adversarial frameworks [GitHub Link](#), Framework: PyTorch

- Fixed a bug on the reference open-source framework [\[Link\]](#)

### Experimenting with Web Honeypots: How robust is SNARE-TANNER?

*Supervisor : Dr. Angelos Stavrou*

*Mar '21 - Apr '21*

- Devised and demonstrated vulnerabilities for attackers to bypass detection in SNARE-TANNER framework, [details here](#).

### Road Genie (2017)

- An android application to assist users get an optimal route considering 3 metrics: distance, time, and comfort

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## SKILLS

**Languages:** Python, Java, C++, C, L<sup>A</sup>T<sub>E</sub>X, JavaScript, Assembly (x86), familiar with R

**Framework:** Django Rest, Tensorflow, PySpark, PyTorch, familiar with Flask

**Database Management System:** SQL, PostgreSQL, familiar with MongoDB

**Other:** HTML, CSS, Bootstrap, jQuery, familiar with Android, Redis, NodeJS, Apache, AWS

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## AWARDS & ACHIEVEMENTS

Awarded **University Merit List Scholarship** for academic performance at BUET

Awarded **Dean's List Scholarship** for academic performance at BUET

Awarded **Dhaka Board SSC & HSC Scholarship** in 2011 & 2013 respectively