

Sazzadur Rahaman

PHD CANDIDATE · SECURITY ENTHUSIAST

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Summary

PhD Student in CS@VT, interested in **Cryptography, Computer and Cyber Security**. **3.5+ years of industry experience** in OOP, AOP and **JavaEE technologies**, Smart card and payment based solutions. Founding member and initiator of JUG BD (Java User Group, Bangladesh). **Speaker in JavaOne-2015**, JUG BD Meetup (3.0 & 5.0). Answered 165+ questions with **4100+ reputation** in stackoverflow. Authored 4 technical papers in diverse areas (e.g., cryptography, program analysis, graph theory, etc.). Reviewer of IEEE TDSC Journal.

Education

VT (Virginia Tech)

Blacksburg, VA

PHD CANDIDATE (3rd YEAR) IN COMPUTER SCIENCE

2015 - PRESENT

- CGPA: 3.94/4, Advisor: Danfeng (Daphne) Yao. **[2 conference papers, 1 poster]**
- **Research Focus:** Minimizing the gap between theory and the applications of cryptographic schemes and protocols (e.g., Group signatures) for wide adoption. Building various tools for detection and prevention of cryptographic misuses.

BUET (Bangladesh University of Engineering and Technology)

Dhaka, Bangladesh

B.S. IN COMPUTER SCIENCE AND ENGINEERING

2006 - 2010

- CGPA: 3.64/4, Advisor: Md. Saidur Rahman. **[2 conference papers, 1 newsletter]**
- **Research Focus:** Solving theoretical problems in the area of graph theory (e.g., graph drawing, anti-bandwidth problem, etc.).

Experience

Computer Science, Virginia Tech

Blacksburg, VA

GRADUATE RESEARCH ASSISTANT [PROF. DANFENG (DAPHNE) YAO]

Aug'15 - May'17 | Aug'17 - PRESENT

- Scalable anonymous-yet-accountable crowdsensing using a new VLR-based group signature scheme. **[C/C++, JavaEE, Gatling, Android]**
- Tools for detecting/preventing crypto-vulnerabilities in the wild. **[C/C++, LLVM, Clang, Soot, Java]**
- Detection of "high-level" user actions by looking into "low-level" system call traces. **[PhantomJS, Javascript, Java, Python]**

Data Security Technologies, LLC

TX, USA

SOFTWARE ENGINEER INTERN

May'17 - Aug'17

- Significant contribution in architecture level design, development and performance tuning/optimization of PrivateMR. PrivateMR is a solution to enforce on-the-fly data protection (obfuscation, encryption) policies in Hadoop and Spark infrastructure.
- Utilized previous experience to standardize software engineering practices and tools.
- **Notable Tools:** **[Spark, Hadoop, Spring, Scala, Python, Bash script.]**

Kona Software Lab Ltd

Dhaka, Bangladesh

SOFTWARE ENGINEER AND SCRUMMASTER

Mar'14 - Jul'15

- Significant contribution in architecture level design and development of crucial products (e.g., Kona Pay [\[news\]](#), Kona HCE, TSM etc.).
- Read various specs for smart card and secured solutions (GlobalPlatform, ISO/IEC, ETSI, Visa, MasterCard, American Express, EMVCo, etc.) and applied them to build products of global standards.
- Significant contribution in standardizing software engineering practices and tools effectively throughout the organization.
- **Notable Tools:** **[Servlet, JSP, Spring, JMS, Hibernate, Oracle, Android, Gradle.]**

Therap Services, LLC

Dhaka, Bangladesh

SOFTWARE ENGINEER

Apr'12 - Feb'14

- Worked in different roles: feature implementation, realtime system performance monitoring, analysis and optimization to peer code reviewing.
- Wrote utility framework for generic spread sheet generation, which helped to cut down around 90% of the related boilerplate codes.
- **Notable Tools:** **[Servlet, JSP, JSF, JMS, EJB, CDI, Seam Framework, Spring, Hibernate, Oracle, Ant, Maven, Gradle.]**

Publication

- [Sazzadur Rahaman](#), Danfeng (Daphne) Yao. "Program Analysis of Cryptography Implementations for Security." 2017 IEEE Secure Development Conference (**SecDev**). Cambridge, MA, USA. September, 2017.
- [Sazzadur Rahaman](#), Long Cheng, Danfeng (Daphne) Yao, He Li, and Jung-Min (Jerry) Park. "Provably Secure Anonymous-yet-Accountable Crowdsensing with Scalable Sublinear Revocation." The 17th Privacy Enhancing Technologies Symposium (**PETS**). Minneapolis, MN, USA. July, 2017.
- [Sazzadur Rahaman](#), Tousif Ahmed Eshan, Sad Al Abdullah. "Antibandwidth Problem for Itchy Caterpillars." 2014 International Conference on International Conference on Informatics, Electronics & Vision (**ICIEV**). Dhaka, Bangladesh. May, 2014.
- Mohammad Raihanul Islam, [Sazzadur Rahaman](#), Rakibul Hasan, Ridwan Rashid Noel, Asif Salekin, and Hasan Shahid Ferdous. "A Novel Approach for Constructing Emulator for Microsoft Kinect XBOX 360 Sensor in the .NET Platform." 4th International Conference on Intelligent Systems Modelling & Simulation (**ISMS**). Bangkok, Thailand. January, 2013.

Reference

Available upon request.