A K M MUBASHWIR ALAM

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Work Experience - Software Engineering Intern, RingCentral Inc., CA, USA

[Jun 2021 - Present]

- Graduate Research Assistant, Marquette University, WI, USA - Graduate Research Assistant, Wright State University, OH, USA

[Aug 2020 - Present] [Aug 2018 - Jul 2020]

- Software Engineer II, Samsung Electronics, Dhaka, BD

[Feb 2013 - Aug 2018]

Education

Ph.D. in Computer Science

[Aug 2018 - Present]

Marquette University, USA

Research Interest: Privacy Preserving Cloud Computing, which includes secure computation with SGX, secure database, data analytics and machine learning.

B.Sc., Computer Science and Engineering

[Jan 2009 - Dec 2012]

American International University Bangladesh (AIUB), BD

Thesis: 'A Dynamic Programming approach to solve Minimum Rectilinear Steiner Tree'

CGPA: **3.75** out of 4.00

Publication

- AKM Mubashwir Alam, Sagar Sharma, and Keke Chen, "SGX-MR: Regulating Dataflows for Protecting Access Patterns of Data-Intensive SGX Applications", Proceedings of Privacy Enhancing Technologies (PoPETs), 2021
- Sagar Sharma, AKM Mubashwir Alam, and Keke Chen, "Image Disguising for Protecting Data and Model Confidentiality in Outsourced Deep Learning", IEEE CLOUD Conference, 2021
- T.I. Chowdhury, M.M. Rahman, AKM Mubashwir Alam, ..., Shahriar Rizwan, "A multi-step approach for RSSibased distance estimation using smartphones", Networking Systems and Security (NSysS), 2015

Patent

- System for secure, low cost and efficient indoor positioning and navigation system of Internet of Things objects, Md.Mahbubur Rahman, AKM Mubashwir Alam, Md. Tawhidul Islam Chowdhury, ..., Mohammad Anwarul Hoque, Accepted for US Patent. Samsung Electronics Co., Ltd

Projects

• Debug Log Collector for RingCentral Telecommunication

[2021]

- Build services for scalable, high-performance architecture, which handles terabytes of log data.
- Build proprietary components and utilize open-source technologies and stacks.
- Programming Language : C/C++, Python

• Secure outsourced data analytics with SGX

[2019-2021]

- Developed MapReduce F/W for SGX
- Developed mitigation methods for access pattern based side channel attacks
- Programming Language : C/C++

• Samsung Galaxy Watch Manager (iOS)

[2016-2018]

- R&D Works to solve supporting multiple Gears problem for Wearable SDK
- Developed Connection Module of Gear S, Gear Fit and IconX
- Programming Language: Objective-C

Distance Estimation using Ultra sound and BLE in Raspberry Pi

[2014-2015]

- Design an Algorithm to estimate distance using Ultrasound and BLE communication
- Programming Language: C/C++, Java

• RSSI-based Proximity Service

[2013-2014]

- Analyze RSSI based distance models approach
- Development of Bluetooth Classic/Low Energy features
- Programming Language: Java, Android

Skills

- Language: C/C++, Java, Python, JavaScript, Objective C
- Technologies: TEE, Intel SGX, Hadoop, Spark, RocksDB, MySQL, Android, iOS

Awards & Achievements

- Dr. Anwarul Abedin Leadership Award for Programming, 13th Convocation, AIUB, 2013
- Professional Level in Software Capability Test, 2014 at Samsung Electronics (Global).
- 2 times Icon Of The Month Award at Samsung Electronics.

Problem Solving

- Solved a total of 1000+ competitive problems on LightOJ, UVa, Codeforces and other online judges.
- Participated in National and International level Programming Contests during 2010-2012.