

Curriculum Vitae: Ifteher Alom

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| PERSONAL INFORMATION | Doctoral Student LBF Graduate Fellow University of Kentucky | <i>LinkedIn:</i> www.linkedin.com/in/ifteheralom <i>Address:</i> Lexington, KY, USA <i>E-mail:</i> ifteheralom@uky.edu |
| RESEARCH INTERESTS | Applied Cryptography, Distributed Systems, NextG Security, Privacy, Anonymity, Identity Management, and Blockchain Applications. | |
| EDUCATION | Ph.D. in Computer Science University of Kentucky, Lexington, United States | 2023 to date |
| | Advisor: Dr. Yang Xiao | |
| | Current Research Focus: Explore Self Sovereign Identity (SSI) tools for enhancing security and privacy aspects in identification schemes, applications of Zero Knowledge Proof (ZKP) and Trusted Execution Environment (TEE). | |
| | B.Sc in Computer Science and Engineering Shahjalal University of Science and Technology, Sylhet, Bangladesh | 2016 to 2019 |
| | Final Year Project: Performance measurement framework for private blockchain platforms | |
| | Electives: Computer Security, Database Systems, Artificial Intelligence | |
| | Projects: | |
| | <i>Block explorer for private blockchain platform.</i> Developed a middleware to fetch and present data from the blockchain using platform SDK for Hyperledger Fabric applications deployed on a local blockchain network using docker. | |
| | <i>Online course management system.</i> Portal for teachers and students to manage class schedules, course registration, attendance, and results. | |
| | <i>Tutor finder mobile app and website.</i> Android mobile app and website featuring area-based tutor search, profile management, and chat room. | |
| JOURNAL PUBLICATIONS | <ul style="list-style-type: none">[1] Yue Li, Ifteher Alom, Wenhai Sun, and Yang Xiao. "DEXO: A Secure and Fair Exchange Mechanism for Decentralized IoT Data Markets." <i>IEEE Internet of Things Journal (IOTJ)</i>. 2025.[2] Ifteher Alom, Md Sadek Ferdous, and Mohammad Javed Morshed Chowdhury. "Block-meter: An application agnostic performance measurement framework for private blockchain platforms." <i>IEEE Transactions on Services Computing (TSC)</i>. 2023. | |
| CONFERENCE PUBLICATIONS | <ul style="list-style-type: none">[3] Athan D. Johnson, Ifteher Alom, and Yang Xiao. "Rethinking Single Sign-On: A Reliable and Privacy-Preserving Alternative with Verifiable Credentials." <i>Proceedings of the 10th ACM Workshop on Moving Target Defense (MTD)</i>. 2023.[4] Ifteher Alom, et al. "Dynamic management of identity federations using blockchain." <i>Proceedings of the IEEE International Conference on Blockchain and Cryptocurrency (ICBC)</i>. 2021. | |
| POSTERS | <ul style="list-style-type: none">[5] Ifteher Alom, Yue Li, Yang Xiao, "VeriSSO: Privacy-Preserving Legacy-Compatible Single Sign-On Using Verifiable Credentials and Threshold Tokens." <i>In the 33rd USENIX Security Symposium (USENIX Security '24 Posters)</i>. 2024.[6] Ifteher Alom, and Md Ahsan Uddin Shatil. "Performance Measurement Framework For Private Blockchain Platforms." <i>In the 6th International Conference on Networking, Systems and Security (NSysS Posters)</i>. 2019. | |

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| EMPLOYMENT HISTORY | <p>Senior Software Engineer March, 2020 to July 2023 Samsung R&D Institute (SRBD), Dhaka, Bangladesh</p> <p>Projects: OneUI Home, Samsung Messages, Backup and Restore</p> <p>Responsibilities: Develop features according to requirements using new tools, libraries, APIs, and frameworks in <i>Android WearOS</i> and <i>Tizen</i> platforms. Communicate with key stakeholders located in different geographic locations. Research and propose ideas to improve user experience and stability of Samsung services. Explore new technologies that can help in the innovation and development of a smarter ecosystem.</p> <p>Research Assistant September, 2019 to February 2020 Shahjalal University Blockchain and Security Laboratory (SUBSEL), Sylhet, Bangladesh</p> <p>Projects: Securing online university services</p> <p>Responsibilities: Conducted research and development of a prototype for a unified authentication and authorization system for online university services (Federated Identity Management).</p> <p>Tech Stack: SimpleSAMLphp, Zimbra Mail, Hyperledger Fabric, AWS EC2, Docker, Golang, Javascript, CentOS, Ubuntu.</p> |
| AWARDS/ RECOGNITION | <p>2024: Lighthouse Beacon Foundation Graduate Fellowship for research on privacy-preserving identification protocols.</p> <p>2022: Software Certification by Samsung Electronics in recognition of professional programming skills.</p> <p>2021: Samsung Research Icon Employee for delivering project goals and teamwork in Galaxy Watch 5 development.</p> |
| TECHNICAL SKILLS | <ul style="list-style-type: none"> • Programming Languages: Java, Python, C++, Golang, Javascript, PHP • Blockchain Frameworks: Hyperledger Fabric, Ethereum, Bitcoin • Web Technologies: Express, React, Angular, Django, Bootstrap, JSP • Database Tools: MySQL, MongoDB, Firebase • Mobile Development: Android, Tizen • Version Control: Git, Perforce • Operating Systems: Ubuntu, CentOS, Windows |
| VOLUNTEERING ACTIVITIES | <ul style="list-style-type: none"> • Bangladeshi Student Association (BSA), University of Kentucky. <i>Treasurer, 2024-2025.</i> • Association for Data and Computation (ADC), University of Kentucky. <i>Leadership Team Representative, 2024-2025.</i> • Graduate Student Congress (GSC), University of Kentucky. <i>Department Representative, 2024-2025.</i> • Engineering Student Council (ESC), University of Kentucky. <i>Department Representative, 2024-2025.</i> |