EHSAN UL HAQUE

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EDUCATION

Ph.D. in Computer Science and Engineering — University of Connecticut **Oct 2025 (expected)**

- **CGPA**: 4.0/4.0
- **Research Interest**: Usable Security & Privacy, Human-Computer Interaction, AI/ML in HCI, Trustworthy AI.

M.Sc. in Computer Science and Engineering — University of Connecticut **Dec 2024**

B.Sc. in Computer Science and Engineering — Bangladesh University of Engineering and Technology **Mar 2016**

EXPERIENCE

Software Engineer — Meta, Burlingame, California **Jul 2025 – Current**

- Working on developing innovative tools and core functionalities to enhance developer experience and capabilities on the Meta Horizon platform, accelerating third-party creation of immersive virtual experiences and applications.
- Enabled developer growth and monetization by driving cross-organization collaboration, allowing partners to bundle and jointly publish applications for expanded reach and revenue opportunities.

Graduate Research Assistant — University of Connecticut, Storrs, Connecticut **Aug 2019 – Jun 2025**

- Applied Generalized Linear Models (GLM) to identify significant predictors of IoT purchase decisions ($n = 265$), analyzing factors influencing privacy-focused IoT purchase decisions.
- Implemented rigorous data validation protocols for large-scale user studies ($n = 209$), ensuring data quality through systematic participant screening and cleaning methodologies for both qualitative and quantitative analyses.
- Conducted large-scale statistical analysis using ANOVA and post-hoc tests on data collected from 255 participants, identifying significant patterns in user blame attribution across different cybersecurity breach scenarios.

Software Engineer — Enosis Solutions, Dhaka, Bangladesh **Mar 2016 – Jul 2019**

- Designed and maintained large-scale SQL Server database architectures and optimized through query structure optimizations (CTEs, stored procedures, views), reducing latency by 40% for data-intensive applications.
- Implemented Data Access Layers using Entity Framework for relational databases, blending business requirements with efficient data retrievals for high-throughput applications.
- Demonstrated client communication skills as the development team representative, understanding and clarifying business requirements from both technical and non-technical standpoints.
- Led a 5-developer team through Agile sprints and mentored 4 junior engineers towards learning codebase patterns, DevOps workflows, and coding best practices (e.g., SOLID principles), contributing to faster team integration.
- Collaborated in a team environment, developing RESTful APIs and backend services in ASP.NET, achieving 100% unit test coverage with NUnit and Moq, while demonstrating strong problem solving skills.
- Architected end-to-end CI/CD pipelines using TeamCity, Octopus Deploy, and DBUp, accelerating client feedback cycles by 30% and reducing production issues by 20%.

PUBLICATIONS

- **Ul Haque, E.**, & Khan, M. M. H. (2025). *Investigating Users' Decision-making for Data Privacy Controls in the Context of Internet of Things (IoT) Devices Using an Incentive-compatible Lottery Study*. In Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (pp. 1-22). [DOI]
- **Ul Haque, E.**, & Khan, M. M. H. (2025). *Understanding the Association of Update Characteristics, Trust, and Cognitive Dissonance with Intention to Update: A Study in the Context of Microsoft Windows.* [DOI]
- Amer, Y., **Ul Haque, E.**, Rong, Z., & Khan, M. M. H. (2025) *Does Communicating Technical Explanations and Benefits Affect Users' Intention to Adopt? An Exploratory Study in the Context of FIDO2*. [DOI]
- **Ul Haque, E.**, Khan, M. M. H., & Fahim, M. A. A. (2023). *The Nuanced Nature of Trust and Privacy Control Adoption in the Context of Google.* In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (pp. 1-23). [DOI] [**Best Paper Award**]

- **Ul Haque, E.**, Khan, M. M. H., Fahim, M. A. A., & Jensen, T. (2023). *Divergences in Blame Attribution after a Security Breach based on Compliance Behavior: Implications for Post-breach Risk Communication.* In Proceedings of the 2023 European Symposium on Usable Security (pp. 27-47). [DOI]
- **Ul Haque, E.**, & Khan, M. M. H. (2023). *Effect of Device Risk Perceptions and Understandability of Data Management Features on Consumers' Willingness to Pay (WTP) for IoT Device Premium Data Management Plan.* In Proceedings of the 2023 European Symposium on Usable Security (pp. 68-85). [DOI]

SELECTED PROJECTS

Fullstack Job Application Tracker **Go, GORM, PostgreSQL, React, Node.js, Typescript, Azure, Docker**
- Architected and developed a full-stack job tracking system with microservices architecture, orchestrating API, Postgres database, and database backup services through Docker Compose for seamless deployment and scalability.
- Wrote bash scripts for automated database backup and restoration towards ensuring data safety and availability.
- Built REST API with Go Fiber/GORM featuring advanced querying, pagination, and multi-part file upload support.
- Integrated a resume management system leveraging Azure Blob Storage, supporting job-resume relationship tracking.

Amazon Product Review Scraping and Parsing Toolkit **Python, Poetry, Beautiful Soup 4**
- Implemented multi-category product and review extraction tool with proxy integration for reliable web scraping.
- Developed flexible filtering system to allow review extraction based on keywords, ratings, and categories.
- Integrated configurable export formats (CSV/JSON), enabling seamless integration with analytics tools.

Tic-Tac-Toe AI - Unity Game **C#, Unity Engine**
- Developed an AI opponent with three distinct difficulty levels, enabling players to progressively challenge themselves.
- Implemented an unbeatable AI mode, ensuring optimal move selection and strategic gameplay at each step.
- Integrated a 2D GUI-based game interface with real-time move validation, ensuring an engaging gameplay experience.

Multi-Model Classification of CTC Gene Expression Data ***Python, Scikit-learn, Matplotlib, Jupyter notebook***
- Developed and evaluated ML models (SVM, Random Forest, Gaussian NB) for cancer type classification from 525 gene expression samples across 7 cancer types, achieving up to 97% accuracy.
- Engineered end-to-end ML pipeline for RNA sequencing data, implementing data cleaning, normalization, and feature selection using Logistic Regression and Linear SVC estimators.

ML-based Cancer Classification using miRNA Data ***R, caret, dplyr, ggplot2, RStudio***
- Developed and optimized machine learning models (k-NN, Random Forest) for prostate cancer classification using miRNA data, achieving 95% accuracy through rigorous hyperparameter tuning and cross-validation.
- Implemented dimensionality reduction techniques (PCA, t-SNE) and clustering methods (k-means) to analyze high-dimensional miRNA data patterns across patient groups.
- Applied preprocessing and balancing techniques with 10-fold cross-validation (10 repeats) using 75/25 train/test split.

Multi-Feature Cascade Classifier for Anime Face Detection ***C++, OpenCV***
- Developed a multi-feature cascade classifier system for anime face detection, achieving 90% accuracy through ensemble learning techniques that combined multiple specialized facial feature classifiers.
- Trained models for custom feature sets for different facial zones and validated on a dataset of 102 anime faces, demonstrating robust performance across diverse artistic styles and emotional expressions.

TECHNICAL SKILLS

- **Programming Languages & Databases**: Python, R, Go, C#, Java, C, C++, JavaScript, SQL Server, PostgreSQL, MySQL
- **Tools & Frameworks**: .NET, .NET Core, Node.js, Next.js, Docker, Git, GitHub, Linux, Bash, Unity Engine
- **Data Analytics Tools**: PyTorch, Scikit-learn, Numpy, Pandas, Matplotlib, Seaborn, SPSS, Jupyter Notebooks, RStudio

AWARDS & HONORS

- **Predoctoral Prize for Research Excellence Award** (three times), Graduate School, University of Connecticut (2023-25).
- **Best Paper Award**, 2023 ACM CHI Conference on Human Factors in Computing Systems (2023).
- **Conference Participation Award**, Graduate School, University of Connecticut (2023).
- **Synchrony Cybersecurity Graduate Fellowship**, School of Computing, University of Connecticut (2022).
- **Cigna Graduate Fellowship**, Graduate School, University of Connecticut (2020).
- **Dean's List Award**, CSE Department, Bangladesh University of Engineering and Technology (2015).