# Md Omer Danish

[Email](#) | [Linkedin](#) | [Website](#)

William N. Pennington Engineering Building, Reno, Nevada

## RESEARCH INTERESTS

Security and Privacy in AI Agent and Decentralized Systems, Trustworthy ML

## EDUCATION

**University of Nevada, Reno** — Aug' 24 - Present
*Ph.D. in Computer Science and Engineering*

**Bangladesh University of Engineering and Technology** — Mar'16 - Feb '21
*Bachelors in Computer Science and Engineering*

## PUBLICATIONS

### Pre-Prints

- **[IEEE ICDCS 2026, Under Review]** Md Omer Danish, Sammy Tesfai, Minmei Wang, Haofan Cai and Xiaoxue Zhang. **CrossZK: Privacy-Preserving Cross-chain Verification For Multi-Enterprises Blockchain.**

## PRESENTATION

- **[CYBER AI: 2025 UNR Cybersecurity Conference]** Md Omer Danish, Xiaoxue Zhang. **ZKSynergy: Interoperable Blockchain Privacy.** *(2nd Place Best Poster Award)*

## RESEARCH WORK

**Telecom Customer Churn Rate Prediction with ML** — Jun '21 – Dec '21
*Techtrioz*

- Implemented a model that can predict whether a customer will churn or not based on various attributes like age, gender, demography, payment method, monthly charge, contract duration, etc. with 91.6% accuracy.

**Internet Availability, Adoption, and Prediction of Future Demand in Bangladesh** — Mar '18 – Jun '19
*The Bangladesh National ICT Household Survey*

- The nationwide survey conducted by the Government of Bangladesh finds only 16.6% are highly aware of online security, 6.1% have no awareness, and 53% overall lack knowledge, with 60% of the uninformed women.

**Design of a Decimal to IEEE-754 Converter using Verilog** — Oct '18 – Dec '20
*Undergraduate Research with Professor Dr. Md. Mostofa Akbar*

- A specialized integrated circuit design to convert floating-point decimal numbers into single-precision IEEE-754 binary numbers using Verilog while adhering to RTL rules and standards.

## EXPERIENCE

**Graduate Research Assistant** — Aug '24 – Present
*UNRcyber Lab: University of Nevada, Reno* — Reno, USA

- **Privacy-Preserving Blockchain Transfers:** Investigating security and privacy challenges in decentralized systems by developing zero-knowledge proof–based mechanisms for multi-enterprise asset transfers.

- **Decentralized LLM Payment Protocols:** Designing privacy-preserving token payment protocols to ensure security, privacy, and fairness between service providers and users within decentralized LLM ecosystems.

- **Alert Wildfire:** Applying machine learning and edge computing to camera-based surveillance systems to enhance real-time detection and response for wildfire events.

**Big Data Security Engineer** — Mar '21 - Jul '22
*Techtrioz* — Dhaka, Bangladesh

- **CyberShield** (*PySpark, MLlib*): A big data system processing billions of network records daily to provide an admin dashboard. Detects anomalies and intrusions using machine learning.
- **Data Segregation** (*.Net, C#*): Built a system using the .Net framework to process PDF reports and automate the generation of desired data summaries.
- **TruckShare Plus**: Developed an Android application for collaborative resource utilization in logistics, resulting in a 25% reduction in transportation costs.

## Teaching Experience

**Graduate Teaching Assistant**                                    Spring 2026, Fall 2025
*CS 446/646 – Principles of Operating Systems*

## Technical Skills

**Languages**: C/C++, Python, Java, SQL, Verilog, Assembly 8086, CSS
**Libraries**: Pyspark, NumPy, Pandas, Matplotlib, Seaborn, Tkinter, OpenCV
**Database**: MySql, Cassandra, Oracle
**Scripting**: LaTeX, HTML, CSS, Javascript, bash, shell
**IDE**: IntelliJ IDEA, NetBeans, Eclipse, Visual Studio, VS Code, Code Blocks, AVR studio, PyCharm, Navicat
**Tools**: Wireshark, Cisco Packet Tracer, SEED Ubuntu, Git, Docker, Jira, Bitbucket

## Standardized Test Scores

**GRE : 312** (Q-164, V-148, AWA-3)
**TOEFL : 100** (L-28, R-25, S-23, W-24)

## Awards and Achievements

- 2nd Place Best Poster Award, 2025 UNR Cybersecurity Conference                 2025
- General Scholarship from Bangladesh Government                              2016 – 2021
- Talentpool Scholarship from Bangladesh Government                           2014 – 2015