

# Md Omer Danish

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

William N. Pennington Engineering Building, Reno, Nevada

## RESEARCH INTERESTS

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Security and Privacy in AI (Agent) and Decentralized Systems, Trustworthy ML, HCI

## EDUCATION

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**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

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### 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

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

## RESEARCH WORK

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**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

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**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

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### Graduate Teaching Assistant

Spring 2026, Fall 2025

*CS 446/646 – Principles of Operating Systems*

## TECHNICAL SKILLS

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**Languages:** C/C++, Python, Java, SQL, Verilog, Assembly 8086, CSS

**Libraries:** Pyspark, NumPy, Pandas, Matplotlib, Seaborn, Tkinter, OpenCV

**Database:** MySQL, Cassandra, Oracle

**Scripting:** L<sup>A</sup>T<sub>E</sub>X, 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

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**GRE : 312** (Q-164, V-148, AWA-3)

**TOEFL : 100** (L-28, R-25, S-23, W-24)

## AWARDS AND ACHIEVEMENTS

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