

# Mohsin Khan

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**Summary:** PhD researcher in cybersecurity (thesis submitted, awaiting defence) with experience in developing security frameworks for distributed systems, analysing vulnerabilities, and implementing access control and cryptographic protections. My goal is to learn and contribute my expertise to Honeywell's industrial cybersecurity strategy.

## Work Experience

### UiT Norges Arktiske Universitet

Tromsø, Norway

#### PhD Research Fellow

Nov 2021 – Dec 2025

- Designed and evaluated secure architectures for distributed IoT systems by implementing access control and cryptographic protections across embedded and cloud environments, improving overall system resilience and reducing exposure to security threats.
- Built and tested experimental frameworks to measure system behaviour, and analyse implementation results using Python and embedded platforms.

### Blackbuck Insight

Bangalore, India

#### Data Engineer

Jan 2021 – Nov 2021

- Improved reliability and quality of structured and unstructured data pipelines by migrating workflows to AWS, applying IAM-based access controls, and monitoring operational performance, ensuring stable, analysis-ready datasets for downstream modelling and evaluation.
- Built and optimized distributed data processing workflows using PySpark, MapReduce, and Linux-based systems, enabling scalable data preparation and faster analysis across high-volume datasets in production environments.

## Education

### UiT Norges Arktiske Universitet

Tromsø, Norway

#### Doctor of Philosophy in Cyber Security

Nov 2021 – Dec 2025 (Expected)

- **Title:** End-to-End Security for Resource-Constrained IoT Systems in Distributed Environments. 📄

### Indira Gandhi National Open University

New Delhi, India

#### MBA in Operations Management

Jan 2019 – Jul 2022

- **Title:** Impact of Management Information Systems (MIS) on Banking Efficiency 📄

### Central University of Jammu

J&K, India

#### M.Tech in Computer Science and Engineering

Aug 2018 – Nov 2020

- **Title:** Traffic Jam Minimization and Accident Avoidance System using IoT 📄

### Baba Ghulam Shah Badshah University

J&K, India

#### B.Tech in IT & Telecommunication Engineering

Aug 2014 – Jun 2018

- **Title:** Smart and Secure Home 📄

## Certifications

**AWS:** Amazon Web Services Certified Developer – Associate 📄

Feb 2021

**Databricks:** Certified Associate Developer for Apache Spark 3.0 – Python 📄

Apr 2021

**AICTE:** Real-Time Power System Analysis and Smart Grid 📄

Mar 2019

## Skills

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**Cyber:** Risk Assessment, Threat Modeling, Vulnerability Analysis, Incident Response Fundamentals

**Cybersecurity Engineering:** Secure Architecture Design, IAM, Cryptographic Controls, System Hardening, Secure Configuration

**Cybersecurity Framework:** NIST CSF, NIST SP 800-53, NIST SP 800-183 (Networks of Things), Zero Trust Principles

**Security Products:** AWS IAM, Linux Security Tools, Docker Security, Monitoring Tools (Prometheus, Grafana)

## Project Work

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**DTEA: Distributed Trust Enforcement System (2024–2025):** Designed and implemented a secure, distributed IoT architecture using cryptographic controls, identity management, and secure communication workflows to strengthen system resilience and protect sensitive interactions across multi-node environments.

**Lightweight Cryptography Benchmarking on Embedded Systems (2023–2024):** Built and evaluated security-critical implementations of lightweight hash and cipher functions on embedded devices (ATxmega128, STM32F3) using ChipWhisperer for performance analysis.

**Benchmarking Suite (2024):** Engineered a measurement framework for analysing cryptographic performance, energy usage, and reliability on low-power edge devices, enabling security-aligned design decisions through structured testing and vulnerability-oriented evaluation.

## Achievements

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**Best Paper Award:** “Smart n Secure Home using IoT,” presented at the National Conference on Recent Advances in Computer Science and IT (NCRACIT). [🔗](#)

**Certificate of Appreciation:** Awarded for exemplary performance in the university-level drawing competition at Baba Ghulam Shah Badshah University (BGSBU). [🔗](#)

## Interests

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**Sports:** Bodybuilding, Fitness Training, Strength Training

**Others:** Leadership, Management, Finance, Programming

**Languages:** Hindi, Urdu, English, Kashmiri (Native), Norwegian (Beginner – actively learning)

## References

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