Mohd Mamoon

Computer Science
University of Kansas, US

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EDUCATION

PhD - Computer Science *(2024-Present)*
University of Kansas | Lawrence, USA
Bachelor of Technology - Computer Engineering *(2020 - 2024)*
Aligarh Muslim University | Aligarh, India *GPA: 8.845/10*

RESEARCH INTERESTS

- Blockchain, Cryptography, Network Security, and Cybersecurity

EXPERIENCE

- **Graduate Teaching Assistant** | *University of Kansas* *(August'24- Present)*
  - Teaching the scope of software engineering, life-cycle models, software process, teams, ethics, tools, testing, planning, and estimating.
- **Summer Research Intern** | *International Institute of Information Technology, Bangalore* *(June'23-July'23)*
  - Worked on a Distributed and Dynamic Service Level Agreement (SLA) under the supervision of Prof. Jyotsna Bapat
  - Developed an environment for interaction between consumer and provider and storing these transactions on a distributed ledger using Linux (Ubuntu)
  - Obtained graphical results on MatPlotLib for the dynamic allocation
- **Research Intern** | *Indian Institute of Technology, Kharagpur* *(Remote)*
  - Worked on Supply Chain Management of Pharmaceuticals using IoT and Blockchain under the supervision of Prof. Sourav Mukhopadhyay
  - Developed a smart contract for tracking pharmaceutical products from the manufacturer to wholesaler to retailer and to consumer
  - Simulated a virtual IoT device for finding the temperature, humidity, pressure, and light of the medicinal product
  - The research work is accepted at IEEE GCITC 2023
- **Research Experience for Undergraduates (REU) Program** | *APJ STEM Centre, AMU in collaboration with The Ohio State University, USA* *(Nov'22-Apr'23)*
  - Worked on a BYOD Authentication system using blockchain under the supervision of Dr. Abdus Samad
  - The system was secure against ReEntrancy attacks (decentralised systems are prone to it)
  - Presented the research work at 14th ICCCNT 2023, IIT Delhi

PAPER PRESENTATION & PUBLICATION

- **M. Mamoon,** M. Saim, I. Shah and A. Samad, "A Decentralized BYOD Authentication System secure against ReEntrancy Attacks" "," 2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT), IIT Delhi, India, 2023
- M. Saim, **M. Mamoon,** I. Shah and A. Samad, "E-Voting via Upgradable Smart Contracts on Blockchain" 2022 International Conference on Futuristic Technologies (INCOFT), Belgaum, India, 2022, pp. 1-6
- **M. Mamoon,** and I. Shah, "A Pharmaceutical Supply Chain Management using Blockchain and IoT" 2023 Global Conference on Information Technologies and Communications (GCITC-2023), Reva University, India, 2023

PROJECTS

- **E-Voting via Upgradable Smart Contracts on Blockchain** *(Jan'22-July'22)*
  - Developed an Ethereum-based Decentralised application that authenticates users using biometric factors
  - Designed to incorporate privacy, authenticity, and verifiability in the electoral process.
  - Incorporated the novelty of making the smart contract upgradable.
- **A Decentralised BYOD Authentication System** *(Nov'22-April'23)*
  - Developed a smart contract for an authentication system using credentials which are cryptographically secured using the keccak256 algorithm

- Developed a user interface for interaction with the smart contract
- **NFT Marketplace**
  *(Minor Project | Supervisor: **Prof. Sarosh Umar**)* *(Aug'22-Dec'22)*
  - Awarded the highest grade A+
  - Developed an Ethereum base application for the selling and buying of Non-Fungible Tokens (NFT)
  - Tokenized artwork using ERC721 Contracts using OpenZeppelin library
- **A Decentralised Real Estate Management Platform using Blockchain and Smart Contracts**
  *(Major Project | Supervisor: **Prof. Sarosh Umar**)* *(Aug'23-March'24)*
  - Developing a management platform for Real Estate Regulation Authority of India to increase transparency in transactions
  - Overcomes the problem of double spending in real estate agreements

TECHNICAL SKILLS

- **Programming & Scripting Languages**: C, C++, Python, Javascript, Solidity, HTML, CSS
- **Tools & Libraries**: Truffle, Ganache, MetaMask, LaTeX, ReactJS

ACADEMIC ACHIEVEMENTS

- Qualified Graduate Aptitude Test for Engineering (GATE CSE) 2023 *(Feb'23)*
  - Top 10% of 75,000 appeared students
- Awarded Sir Syed Mentoring and Assistance Fellowship *(Jan'23-June'24)*
- Awarded 3rd Prize in 'In House Students' Research Convention' organized by Innovation Council and University Incubation Centre, AMU, Aligarh *(Oct'22)*

COURSES & CERTIFICATIONS

- NPTEL Course on Cryptography and Network Security (COURSE TOPPER) *(July'22-Oct'22)*
  - Top 5 percent out of 1810 certified students
  - Awarded ELITE+GOLD Certification with 91 percent marks by IIT Kharagpur, India
- NPTEL Certificate Course on CLOUD COMPUTING *(Jan'23-April'23)*
  - Awarded ELITE+SILVER Certification with 77 percent marks by IIT Kharagpur, India
- NPTEL Certificate Course on BLOCKCHAIN AND ITS APPLICATIONS *(Jan'22-April'22)*
  - Awarded ELITE Certification by IIT Kharagpur, India
- NPTEL Certificate Course on ETHICAL HACKING *(Jan'23-April'23)*
  - Awarded Certification by IIT Kharagpur, India
- Qualified 6th National Engineering Olympiad *(March'22)*

REFERENCES

- Prof. Mohammad Sarosh Umar
  Professor and Former Chairman
  Department of Computer Engineering
  Aligarh Muslim University, India.
  Email id: saroshumar@zhcet.ac.in

- Dr. Abdus Samad
  Associate Professor
  Department of Computer Engineering
  Aligarh Muslim University, India.
  Email id: abdussamad@zhcet.ac.in