Rahul Sharma

DATA ANALYST / MACHINE LEARNING ENGINEER / FULL-STACK DEVELOPER / CYBERSECURITY ANALYST

New Delhi, India |
+91-7982928814

LinkedIn
Github

rahulsharmapro10@gmail.com

EDUCATION

Bachelor of Technology (B.Tech.) - Computer Science and Engineering (Hons. Specialization: Artificial Intelligence and Machine Learning) Sep 2021 - Jul 2025
Amity School of Engineering and Technology, Amity University, Noida, India

---

EXPERIENCE

Quantum Computing and AI Intern
(Tech Mahindra, Noida, India | May 2024 - Jul 2024)
- Developed quantum computing techniques for portfolio optimization, improving efficiency and accuracy.
- Contributed to meta-virtual reality AI with interactive facial features, enhancing VR interactions.

Data Science Intern
(Coders Cave, New Delhi | Sep 2023 - Oct 2023)
- Analyzed and manipulated data using Python for predictive modeling, contributing to threat intelligence analysis and cybersecurity insights.
- Built and deployed machine learning models for identifying user behavior patterns, aiding in the recognition of potential security threats.

Software Team Lead
(Amity Institute of Space Science and Technology, Noida, India | Mar 2023 - Dec 2023)
- Led the development of the ADCS for a 3U CubeSat, ensuring precise orientation and stability.

SKILLS

Programming & Software Development:
Python, Java, C/C++, UNIX/Linux, Arduino, Android Development, Software Engineering, Web Development, OOP, Software Testing

Artificial Intelligence & Data Science:
Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Large Language Models, Retrieval-Augmented Generation, Data Analysis, Data Engineering, Predictive Modeling, Data Visualization, SQL, Quantum Computing (IBM Qiskit)

Full-Stack Web Development (MERN):
React, Node.js, Express.js, MongoDB, RESTful API Development, Redux, JSON Web Tokens (JWT), Responsive Web Design

Cybersecurity:
Proficient in MITRE ATT&CK and D3FEND frameworks, web application security principles (OWASP Top Ten), network security, threat analysis, and vulnerability assessment.

IT Operations & Cloud Technologies:
DevOps, Cloud Application Development, Infrastructure Support, Database Management (DBMS), Information Retrieval

Soft Skills:
Problem Solving, Team Leadership, Communication, Adaptability, Time Management

---

LICENSES & CERTIFICATIONS

- **CS50 Cybersecurity** (Harvard University, 2023)
- **Machine Learning Specialization (DeepLearning.AI, 2023)** - *ID: 4MKSEL3R4EV4*
- **Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization (DeepLearning.AI, 2023)** - *ID: XXKZSQJQTAM4*
- **Programming Fundamentals in Kotlin (Meta, 2023)** - *ID: 9J72HNK5XTHQ*
- **Introduction to Android Mobile Application Development (Meta, 2023)** - *ID: ZGNV2H5ZCKVS*

PROJECTS

- **Automated Attack Simulation Framework**
  Developed an end-to-end framework for simulating cyber-attacks and defenses using attack and target virtual machines, leveraging the MITRE ATT&CK framework for mapping adversary TTPs.

- **Threat Analysis Framework**
  Created a Python-based framework utilizing MITRE ATT&CK to automate threat mapping and attack simulation, incorporating data visualization for better threat understanding.

- **Portfolio Optimization using Quantum Computing**
  Developed quantum algorithms (SVQE, QAOA) with Qiskit and AWS Braket for portfolio optimization, comparing results against classical Mean-Variance Optimization (MVO).

- **Retrieval-Augmented Generation (RAG) with Langchain**
  Created a RAG system using Langchain, incorporating advanced NLP techniques for superior content generation.

- **E-commerce Platform (MERN Stack)**
  Designed a scalable e-commerce application with React, Node.js, Express, and MongoDB, featuring user authentication, product catalog, and order management.

- **Social Media App (MERN Stack)**
  Built a social media application featuring user profiles, posts, likes, and comments using the MERN stack, achieving optimized database queries and front-end performance.

- **Image Captioning System**
  Designed an image captioning solution leveraging CNNs and RNNs for automated descriptive text generation.

- **Real-time Sign Language Translation**
  Built a sign language translator using Mediapipe, OpenCV, TensorFlow, and Keras for real-time communication.

- **Wearable Health Monitoring Device**
  Engineered a wearable device with sensors for pulse, fall detection, and emergency alerts, supported by a real-time web interface.

- **Smart Parking Management Application**
  Developed a Flutter app for automatic parking management, using computer vision for license plate recognition. Participated in Smart India Hackathon 2023.

- **Voice-controlled Virtual Assistant**
  Developed a voice-controlled assistant using Ollama, pyttsx3, and speech recognition, achieving high command interpretation accuracy.