

MAAZ MUGHAL

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Education

George Mason University

Sep 2022 – May 2026

Bachelor of Science in Information Technology

Fairfax, VA

- **Concentration:** Cybersecurity and Cloud Computing
- **Relevant Courses:** Network Security, Information Defense Technologies, Forensics & Auditing, Applied Generative AI, Data Communications, OS Fundamentals, Database Management, IT Project Management
- **Awards:** Dean's List Scholar, GMU Undergraduate Research Scholarship Program Award Recipient [Fall 2024]
- **Certifications:** CompTIA Security+, AWS Solutions Architect Professional, AWS Certified Developer Associate, AWS DevOps Engineer Professional, IBM Cybersecurity Analyst Professional Certificate

Experience

Peer Mentor

Feb 2024 – Dec 2024

George Mason University

Fairfax, VA

- Provided one-on-one academic guidance to undergraduates in technical courses, assisting 10–15 students weekly.
- Facilitated interactive study sessions and resource sharing, boosting student engagement and retention during exam prep.

Data Engineer & Web Developer (Contract)

Jun 2023 – Dec 2024

Upwork

Remote

- Delivered secure, high-performance client solutions across data engineering and web development.
- Built ETL pipelines with SQL and cloud platforms (Azure, Google Cloud), transforming raw data into analytics-ready datasets.
- Designed responsive websites and integrated APIs, payment systems, and AI-driven tools (chatbots, analytics).
- Optimized queries, managed relational databases, and implemented backup/recovery for compliance.
- Developed automated dashboards with Excel, Office 365, and Power BI, enabling data-driven insights.

IT Administrator Intern

Jan 2023 – Apr 2023

Worldwide Travel Inc.

Washington, DC

- Assisted in troubleshooting hardware/software issues and provided technical support to end-users.
- Conducted system updates, network maintenance, and backup/recovery procedures to ensure reliability.
- Installed and configured computer systems, improving IT support response time and overall system stability.

Summer Intern

Apr 2019 – Sep 2019

Cloud Tech IT Solutions LLC

Dubai, UAE

- Constructed a credit card fraud detection autoencoder (TensorFlow and Python).
- Extracted business requirement analytics from terabyte-scale data to model client solutions.
- Conceptualized a future AI pipeline to estimate uptime and downtime from CI/CD pipeline data.

Projects

Real-Time E-Commerce Data Pipeline | *Python, SQL, PySpark, Kafka, Airflow, AWS*

Jan 2025 – Present

- Built a real-time e-commerce pipeline with a medallion data model (Bronze/Silver/Gold) to support analytics.
- Implemented data ingestion with Kafka, transformations in PySpark, and orchestration via Apache Airflow.
- Stored data in Parquet, queried with DuckDB/Redshift, and created KPI dashboards with Streamlit and Power BI.

Degree Design | *Android Studio, Java, Firebase, Git, Jira, JUnit, Mockito*

Mar 2024 – Aug 2024

- Created an Android app that allows students to generate personalized degree timetables based on completed and desired courses.
- Engineered an authentication system for secure timetable access and an admin panel for managing course information.
- Conducted functionality testing using JUnit and Mockito to identify and resolve bugs efficiently, reducing fault rate by

Network Penetration Testing Tool | *Python, CVE APIs, Ethical Hacking*

Jan 2024 – May 2024

- Developed an automated penetration testing tool with CVE scanning and reporting to detect critical vulnerabilities.
- Designed a simple user interface for faster vulnerability analysis, improving accessibility for non-expert users.
- Applied hands-on cybersecurity skills in ethical hacking, network defense, and vulnerability management.

Technical Skills

Languages: C, Python, Java, R, JavaScript, TypeScript, HTML, CSS, Racket, Haskell, Prolog, PostgreSQL, Kotlin, Terraform

Frameworks: React, Express, Node, React Native, Next, Vercel AI SDK, LangChain, LangGraph, Exa, CrewAI, Redis

Cloud: AWS (S3, EC2, Redshift, IAM, CloudWatch), Azure, GCP

Security: Wireshark, Nmap, CVE Scanning, Penetration Testing

Tools: AWS, MongoDB, Supabase, Clerk, Docker, Jira, Git, Figma, Android Studio, Firebase, Linux, Agile, HuggingFace, Office 365

Libraries: Pandas, NumPy, Matplotlib, socket.io, scikit-learn, Crawl4AI, PyTorch, Tensorflow, Keras