ALI MOHSIN

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EDUCATION

George Mason University | *Fairfax, VA*   *Expected Graduation: Dec 2026*
B.S. Applied Computer Science, Minor in Data Science
- **GPA:** 3.6/4.0 (Dean's List)
- **Relevant Coursework:** (AP/DE Credits: 46), Data Structures, OO, (Python and Java), C Programming, Statistics, Linear Algebra, Formal Methods/Models, Software Engineering, Software Design
- **Fall 2025:** Systems Programming, Algorithms, Databases, Software Testing and Maintenance, Web App Development

EXPERIENCE

AI/ML Software Developer Intern | *Network Designs, Inc*   *May 2025 – Aug 2025*
- Collaborated with cross-functional teams using Agile methodologies to architect an enterprise mobile application.
- Delivered an AI-powered HR assistant and real-time content management system to 500+ internal users across iOS and Android platforms.
- Engineered a headless Strapi CMS on Strapi Cloud with a PostgreSQL backend, optimizing automated JSON-driven content ingestion and data pipeline processes.
- Built REST APIs with role-based permissions and integrated Azure AD SSO for secure authentication.
- Implemented Firebase Messaging for React Native delivery, reducing management overhead by 60%.
- Architected code modernization platform using FastAPI, LangChain, and OpenAI API with retrieval system.
- Deployed Qdrant vector database and Tree-sitter multi-language parsing for automated code analysis.
- Enabled automated generation of user stories, unit tests, and microservice templates, reducing analysis time by 80%.

Data Science Intern | *Ballogy | FiveRivers Technologies*   *May 2024 – Aug 2024*
- Collaborated with a team using Agile methodologies to develop an AI-driven basketball training platform.
- Delivered real-time insights to 100+ coaches and dozens of schools nationwide, enhancing performance tracking for 15,000+ athletes.
- Engineered a pose detection system utilizing YOLOv8 and Google MediaPipe, deployed on AWS EC2 for scalable processing.
- Automated dataset annotation for 2 million frames, streamlining data cleaning and preprocessing workflows to improve accuracy by 30% and scalability by 50%.
- Developed a financial analysis tool, performed data wrangling techniques to standardize metrics of 156 companies with NumPy and Pandas for exploratory data analysis (EDA) and data visualization.
- Formulated an image enhancement pipeline using AWS S3, Pillow, and Canny edge detection, reducing false positives by approximately 94%.

PROJECTS

StartHub (In development) | *React, Node.js, MongoDB, Express*
- Project and Startup Collaboration Platform targeted for young startup enthusiasts and college students.

Stock Guru | *Node.js, FastAPI, React Native, Expo*
- Engineered a financial analysis system with React Native (Expo) and Alpha Vantage API to display real-time market data and investment recommendations, incorporating technical indicators (RSI, MA50/200) and sentiment analysis.
- Built a backend pipeline with Node.js for live data aggregation, FastAPI for analysis and report generation, and NodeCache for low-latency performance and reduced response times.

BEIGHT Workout App (In development) | *React Native, Python, Jupyter, OpenCV, MediaPipe, NumPy, PostgreSQL*
- Spearheading the development of an AI-powered body-weight workout app utilizing computer vision to track posture and count reps in real time, aiming to benefit millions of equipment-free users at home.
- Developed a real-time push-up and squat tracker using OpenCV and MediaPipe to implement pose detection, achieving 95% accuracy in tracking key body landmarks and calculating joint angles to enhance workout precision.

Financial Sentiment Analysis | *Python, Llama 3.1, Streamlit*
- Fine-tuned Llama 3.1 model to classify financial news by sentiment, optimizing for market prediction insights.
- Deployed the model on Streamlit, creating an interactive web interface for real-time sentiment analysis of financial insights.

PDF Semantic Search Engine | *Python, LangChain, FAISS, SentenceTransformers*
- Built a semantic PDF search engine using natural language processing (NLP) techniques by applying SentenceTransformer embeddings and FAISS vector search, enabling fast and accurate semantic retrieval across 1,000+ documents using LangChain for intelligent text chunking.

SKILLS & CERTS

Programming Languages: JavaScript, Python, TypeScript, Java, SQL, Node.js, Kotlin, HTML/CSS, Dart, R, C, MATLAB

Frameworks: React, React Native, Git, GitHub, Vercel, Docker, Expo, Tailwind, Vite, Flutter, LangChain, PyTorch, Strapi, Android Studio, Pandas, NumPy, OpenCV, Jupyter, Expo, Streamlit, Google MediaPipe, Ultralytics YOLOv8, LLMs, FAISS, Seaborn

Cloud: Microsoft Azure (OpenAI, Active Directory, Cognitive Search), AWS (EC2, S3), Firebase (Firestore, Functions, Authentication, Cloud Messaging)

Databases: PostgreSQL, SQLite, Qdrant Vector DB

Certifications: AWS Cloud Practitioner (in progress)