Wasey Mulla

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Education

The University of Texas at Dallas — Richardson, TX
Masters in Computer Science, Track: Intelligence Systems — *Aug. 2023 – May 2025*

The University of Texas at Dallas — Richardson, TX
Bachelor of Science in Computer Science — *Aug. 2019 – May 2023*

Technical Skills

Languages: Java, C++, Python, JavaScript, Typescript, HTML, CSS
Technologies: Apache Kafka, React, React Native, Git, Flask, Tkinker, Tailwind, Expo, Node.js, Spring Boot
Database: MongoDB, MySQL, PostgreSQL
Machine Learning and Data Science Libraries: Pandas, PyTorch, Matplotlib, SciPy, Scikit-Learn, TensorFlow, Keras

Experience

INMO.AI - Machine Learning Engineer Intern — May 2024 – August 2024
Austin, TX

- Developed a real-time mortgage prediction model using TensorFlow and Keras, driving a 20% increase in model accuracy.
- Designed end-to-end streaming data workflows by acquiring market data, profiling for quality, and transforming inputs before feeding them into a Python FastAPI microservice.
- Containerized and deployed the FastAPI service with Docker, ensuring scalable, reliable integration of the machine learning model with the front-end.

Atticus Capital - Software Engineering Intern — May 2022 – August 2022
Minneapolis, MN

- Developed the React Native front end, integrating Atticus Capital's RESTful API to retrieve portfolio metrics, execute transactions, and enforce input validation with comprehensive error handling.
- Collaborated with backend engineers to define API contracts and integrate endpoints, ensuring seamless data flow between the mobile app and server.
- Contributed on designing MongoDB schemas and integrating the database, enabling efficient storage and retrieval of user investment data.

Projects

PhotoSentry: Smart Image Quality Filter

- Built a Java Spring Boot backend to handle image uploads and route image quality evaluation requests, reducing classification latency by 40% via asynchronous REST integration.
- Fine-tuned a pre-trained MobileNetV2 convolutional neural network using transfer learning on a custom dataset with data augmentation, achieving 92% validation accuracy in detecting blurry, underexposed, and noisy images.
- Integrated the machine learning model with the backend using Java's `HttpClient` to communicate with a Python FastAPI microservice serving the TensorFlow inference pipeline.
- Deployed the full-stack system using Docker Compose, combining React frontend, Java backend, and machine learning model server, achieving 95% end-to-end success across diverse image uploads.

SnapMath: The Image-Powered Equation Solver

- Developed a Convolutional Neural Network (CNN) capable of understanding handwritten numbers to solve mathematical problems, bridging the gap between physical and digital mathematics.
- Achieved 95% accuracy in interpreting handwritten mathematical symbols, variables, and operators using OCR technology integrated with CNNs and bounding box methodologies.
- Implemented a robust equation solving framework with Python, TensorFlow, Keras, SymPy, and visualization libraries, demonstrating significant advancements in accuracy.

University Graduate Office Degree Planning & Audit Tool

- Accomplished 80% improvement in advisor response rate by implementing a user-friendly web application, streamlining degree planning and auditing processes for Graduate level Computer Science students at UTD.
- Enhanced efficiency through simplified data input by implementing a document scraper to extract key information from transcripts, automated data filling, enabled user verification, and generated degree plan audit and graduation audit reports.
- Leveraged HTML, CSS, JavaScript, PHP, SQL, and jsPDF for seamless interaction between front-end and back-end components, ensuring speed and accuracy in degree evaluations to create a full-stack application.