Gohur Ali

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Education

University of Texas at Austin **Sept. 2021 – June 2023**

Master of Science (M.S.) in Computer Science

- Coursework: Deep Learning, Android Programming

University of Washington **Sept. 2016 – Apr. 2020**

Bachelor of Science (B.S.) in Computer Science | GPA: 3.73

- Coursework: Computer Vision, Cloud Computing, Linear Algebra, Operating Systems, Hardware, Database Systems, Data Structures & Algorithms, Software Engineering, Machine Learning, Statistics for Machine and Deep Learning

Experience

Intel Corporation | *Tata Consultancy Services* **Mar. 2021 –**

Software Engineer – Full Stack *Seattle, WA*

- Designed responsive and dynamic user interfaces with Angular from the ground up
- Developed backend REST APIs with Express for authentication and storage using MongoDB and Passport
- Collaborated and communicated with team on features and components to ensure quality was maintained

AVA Retail.ai **Sept. 2018 – Feb. 2019**

Software Engineer Intern – Machine Learning *Redmond, WA*

- Developed an automated image generator using Python & Blender that generated over 5000 unique images per day
- Trained a convolutional neural network (CNN) based on RetinaNet with single-shot learning for object detection in TensorFlow using the generated synthetic data combined with real data to improve model detection performance
- Worked closely with QA team to discover and resolve software defects with test-driven development

Research

University of Washington Bothell Dept. of Computer Science **Sept. 2018 – Mar. 2019**

Undergraduate Researcher | Advisors: Dr. Diala Ezzeddine & Dr. Arkady Retik

- Designed a NLP pipeline to match job applicants to jobs based on qualifications
- Developed a novel shallow 1-D CNN architecture in TensorFlow & Keras for sentence classification with pre-trained embeddings which competes with deeper architectures based on standard datasets (97% accuracy)

Projects

QuickBnB | *React, Next.js, Redux, TypeScript, TailwindCSS, MongoDB, Redis, Passport.js*

- Developed a website platform for users to host and book living spaces
- Designed a robust REST API in Node.js & Express to handle profiles, messages, and living space postings
- Built user authentication with Passport.js including integration with Google & Facebook

YOLOv2 Object Detection | *Python, PyTorch, NumPy, OpenCV, Jupyter*

- Developed an object detection pipeline from scratch in PyTorch to detect and classify trained objects in images
- Implemented K-Means clustering to generate K average size anchor bounding boxes found in the dataset
- Implemented a variant from the originally proposed loss function to support any number of anchor boxes

Lane & Vehicle Detection | *C++, Python, OpenCV, Jupyter*

- Calculated Hough transform lines for lanes using ROI, edge detection, and color spacing techniques in C++ & OpenCV
- Trained a SVM model for classification on open source datasets for vehicles and non-vehicles at a 96% accuracy
- Used pyramid scaling sliding window to obtain bounding boxes with non-max suppression to detect vehicles

Financial Stock Forecast Prediction | *Python, PyTorch, NumPy, Pandas, Jupyter, Flask, Kivy*

- Implemented financial indicator algorithms for analysis and data generation
- Developed the full machine learning pipeline with various deep learning models for performance comparison
- Deployed models to web application and Android for on-demand inference with ONNX

Technical Skills

Languages: Python, Java, C++, C#, JavaScript, TypeScript, GoLang, R, Bash
Technologies/Frameworks: TensorFlow/Keras, PyTorch, OpenCV, Scikit-Learn, Pandas, .NET, Linux, AWS, Azure, MongoDB, Express.js, Angular, React, Node.js, GraphQL, Docker