Md Abrar Al Zabir

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EDUCATION

The University of Texas at Dallas Richardson, TX / United States
Bachelor of Science in Computer Science *Present – May 2028*

- Awarded the academic excellence scholarship (AES) renewable for 4 years based on outstanding academic performance.

SKILLS

Languages & Technologies: Python, C++, JavaScript (Core & ES6+), HTML, CSS, ML/DL
Frameworks & Libraries: React.js, Express.js, Node.js, Three.js, Tailwind CSS, NumPy, Scikit-learn, Pandas, Matplotlib, TensorFlow, Keras, LangChain
Databases & Tools: MySQL, MongoDB, RESTful APIs, AWS, Git, GitHub, Firebase, Fast API, Flask

EXPERIENCE

Software Engineer | Machine Learning Richardson, TX / United States
AIS UTD *February 2025 – Present*

- Developed an AI-powered eye health assistant capable of classifying diseases from different eye scans, and delivering personalized eye care suggestions.
- Trained and finetuned an InceptionV3 deep learning model using TensorFlow and Keras, with preprocessing pipelines built using NumPy, Pandas, and OpenCV, and data augmentation handled via Scikit-learn to enhance model generalization, achieving 96.43% test accuracy.
- Built a context-aware AI chatbot utilizing LangChain with a RAG pipeline on the Mistral-7B LLM, on a domain-specific medical knowledge database.
- Developed a responsive frontend using React.js and Tailwind CSS, and implemented RESTful APIs to support backend and model inferences.

Software Engineer | Full-Stack Developer Dhaka, Dhaka / Bangladesh
Himmels Zenith *December 2024 – February 2025*

- Led the development utilizing React.js and Tailwind CSS to develop a fully responsive frontend, employing Context API for global state management.
- Built a robust backend with Node.js, Express, and MongoDB Atlas to support dynamic data management and API integration.
- Designed and implemented RESTful APIs to enable CRUD operations, ensuring efficient data handling and scalability.
- Integrated various payment methods including Stripe and bKash and used Axios for seamless communication between frontend and backend.

PROJECTS

Potato Disease Classification Model *February 2025 – February 2025*
github.com/ClosetCoderSad/ML-DL-Projects

- Utilized TensorFlow to train a CNN for a machine learning (deep learning) model capable of detecting diseases on images of potato leaves.
- Implemented Keras and NumPy for preprocessing datasets from Kaggle, and Matplotlib for visualizing insights.
- Achieved up to 99.87% test accuracy in classifying potato leaves as healthy or diseased (early or late blight).

Sustainify *November 2024– November 2024*
github.com/decloon/HackUTD

- Developed an AI-powered web app for HackUTD 2024 in a team of 4, enabling property managers optimize energy usage and sustainability.
- Built a responsive frontend with ReactJS and Tailwind CSS, and a backend with Flask and PostgreSQL for efficient data storage.
- Integrated data analysis tools like Pandas, Scikit-learn, and Chart.JS, using SambaNova's LLM for tailored insights.