

MJ Alif

AI Technologist |
Product Manager |
LLMs & Generative
Vision AI

Contact

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Kingdom

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Skills

Computer Vision (AI)
Object recognition and
tracking with YOLO
Image segmentation
Stable diffusion
OpenCV
Custom Attention-CNN
Architectures
PyTorch
TensorFlow
Keras
Sklearn
Hugging Face Transformers

LLM (AI)
LangGraph
iLangChain
Prompt Engineering
Retrieval-Augmented
Generation (RAG)

Backend
Ruby on Rails
RSpec
RESTful APIS

With over 6 years of experience in AI, deep learning, and intelligent systems, I specialise in designing and deploying cutting-edge models that bridge the gap between research and real-world applications. My work focuses on large language models (LLMs), computer vision (YOLO architectures), and multimodal AI. I've co-led projects involving prompt engineering, agent orchestration using LangGraph, and integrated LLM-powered tools in collaborative research environments — all aimed at improving safety, factual accuracy, and scalability across language and vision applications. I bring a product mindset to research innovation, thriving on building prototypes, coordinating diverse teams, and translating emerging AI advancements into production-ready solutions.

Work History

Sep 2024 -
Current

Research Assistant – Computer Vision

University Of Huddersfield, United Kingdom

- Utilised Stable Diffusion and prompt engineering to synthetically generate railway hazard scenarios, augmenting training datasets for deep learning models and improving robustness in rare-event detection.
- Improved detection coverage of underrepresented hazard classes by 18%, enabling safer and more comprehensive real-time risk modelling in train component analysis.
- Co-engineered data pipelines for evaluating and fine-tuning vision-language models, exploring prompting strategies to align multimodal outputs with intended behaviours.
- Deployed YOLOv5 through YOLOv10 variants in transportation-focused real-time systems, supporting rigorous AB experiments in both simulation and real-world datasets.

May 2024 -
Sep 2024

AI Engineer – LLM System

University Of Huddersfield, United Kingdom

- Led the design and implementation of a sophisticated multi-agent chatbot system utilising LangChain and LangGraph, integrated with the OpenAI API.
- Built contextual prompt modules for LLMs (e.g., GPT-4), engineering high-quality outputs across diverse task instructions and edge-case queries.
- Aligned stakeholder feedback with model safety and accuracy benchmarks, contributing to program-level sprint planning in tight delivery cycles.

GraphQL
OAuth 2.0
RBAC

Frontend

React.js
JavaScript(ES6+)
HTML5
Tailwind

DevOps

Docker
Kubernetes
GCP
Aws
Github Actions

Databases

PostgreSQL
Redis
MySQL

Testing

Rspec
Capybara
FactoryBot

Frameworks

Pytorch
Keras
Tensorflow
Matplotlib
Scikit Learn
Pandas
Ruby on Rails
Django
Laravel
React.js

Languages

Python
Ruby on Rails
Javascript

Oct 2023 -
April -2024

- Initiated evaluation workflows for incremental fine-tuning via user-in-the-loop and reinforcement signals.

AI Engineer - AI Vision

University Of Huddersfield, United Kingdom

- Built and maintained object detection software aligned with compliance needs in logistics environments.
- Engineered and maintained advanced software for image analysis and detection of pallet racking, enhancing image-based task efficiency by 5%, resulting in a rise from 92% to 97% efficiency.

Aug 2022 -
Aug 2023

Principal Software Engineer

Welltravel, United Kingdom (Remote)

- Optimised web application performance by 40% through codebase refactoring and database query improvements, resulting in faster load times and improved user satisfaction.
- Led a cross-functional team of engineers and designers, improving project completion time by 15% through clear communication and agile project management.

Jul 2020 -
Sep 2022

Technical Lead / Acting CTO

Welltravel, Bangladesh

- Directed over 3 teams, each with 20 team members on average, to achieve the goal of the company and make the software
- Managed company-level architecture, platform and data configuration processes and implementation protocols.

Nov 2017 -
Aug 2020

Senior Software Engineer

Welltravel, Bangladesh

- Trained 15 people from different expertise levels and guided them to the Welltravel system.
- Managed welltravel's technological issues for assigned projects, increasing customer satisfaction ratings.

Education

Master of Science: Artificial Intelligence

University of Huddersfield - United Kingdom

Bachelor of Science: Computer Engineering

Brac University - Bangladesh

Publications

- **Boltvision: A Comparative Analysis of CNN, CCT, and ViT in Achieving High Accuracy for Missing Bolt Classification in Train Components** - MDPI Machines Journal, January 2024
- **Comparative Analysis of YOLOv8 and YOLOv10 in Vehicle Detection: Performance Metrics and Model Efficacy** - MDPI Vehicles Journal, January 2024
- **Isolated Bangla handwritten character recognition with convolutional neural network-** IEEE · Dec 2017
- **Lightweight Convolutional Network with Integrated Attention Mechanism for Missing Bolt Detection in Railways** - MDPI Metrology, January 2024
- **Attention-based automated pallet racking damage detection** - IJSRT - January 2024