S M Azizul Hakim

SOFTWARE ENGINEER · MACHINE LEARNING ENGINEER

Grand Rapids, MI, USA

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Work Experience

Grand Valley State University
Graduate Assistant

Grand Rapids, MI, USA
Jan 2023 - Present

- Built a multi-panel visualization tool with Flask and React that converts semi-structured requirements into structured ones using LLMs.
- Experimented with zero-shot and few-shot prompt engineering techniques on Llama2 models to build an unstructured to structured requirements converter
- Automating software test generation to reduce test generation time by 10x using state-of-the-art NLP models and knowledge graphs.

Reea Digital
Machine Learning Engineer

Dhaka, Bangladesh
Nov 2022 - Dec 2023

- Analyzed the performance of various machine learning models for automatic data preprocessing and annotation.
- Fine-tuned an Electra-QA model to annotate watch features from the raw description.
- Reduced data annotation cost and time by at least 10-fold by using large language models for data annotation.

AIMS Lab
Research Engineer

Dhaka, Bangladesh
Mar 2022 - Sep 2023

- Engineered an AI Smart Receptionist web application (front-end and back-end) featuring speaker identification, face recognition & a conversational module.
- Deployed the app using Docker and Nginx.

Gigalogy
Software Engineer, Machine Learning

Dhaka, Bangladesh
Mar 2020 - Oct 2021

- Collaborated directly with the CEO to build an NLU engine based on Rasa, which can be integrated into any existing chatbot
- Demonstrated analytical and problem-solving skills by writing a complex JSON parser.
- Developed an AI voice assistant based on the NLU engine.
- Analyzed various deep learning based object detection algorithms for better inference time and memory usage.
- Built computer vision APIs for object detection, age-gender prediction, and emotion recognition from both image and video.
- Improved the deep learning based object-detection inference time by over 50%, resolved GPU memory leak issue, and containerized for production.
- Implemented a product search engine using Elasticsearch involving text and other categorical filters.
- Expanded the existing recommendation engine by adding an image recommendation feature.
- Implemented a machine learning based budget prediction feature for online ad campaigns by clustering historical campaign metadata.

Skills

Programming	Python, R, C/C++, JavaScript.
Development	Flask, Fast API | React, React Native | AWS S3 / EC2, Docker, Git / GitHub, Bash | SQL / MySQL, PostgreSQL, MongoDB.
Miscellaneous	ElasticSearch, Redis, Celery, Scrappy.
Machine Learning	Tensorflow, Pytorch, Keras, NumPy, Pandas,OpenCV, Darknet, Huggingface, LLMs, Prompt engineering.

Education

Grand Valley State University
Masters in Applied Computer Science

Grand Rapids, MI, USA
Jan. 2023 - Present

CHittagong University of Engineering & Technology
B.S. in Computer Science and Engineering

Chattogram, Bangladesh
Mar. 2014 - Dec. 2018

Publications

CONFERENCE PROCEEDINGS