Md Nahin Hossain Uday

Softawre Developer and System engineer

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Professional Summary

Forward-thinking Software Development Engineer with expertise in computer vision and machine learning. I have experience working with ADAS cameras of automated cars during my work student role. Building high-performance AI solutions for manufacturing automation, and bridging software hardware interfaces. Skilled in C++, Java, Python, R, and AI model deployment. Passionate about pioneering next-generation robotic applications and driving projects from concept to production.

WORK EXPERIENCE

Wissenschaftliche Hilfskraft

University of Wuppertal, Wuppertal, Germany

Sep 2024 - Present

- Assisted in analyzing and managing large datasets for German road network research.
- Applied statistical methods in the Backend interface to visualize research findings in an interactive app.
- Developed a Flask-React user interface for better interactive visualization.

Data Scientist (Work Student)

Aptiv, Wuppertal, Germany

May 2023-Oct 2023

- Extracted and transformed GPS data from YAML and pickle files using Python scripts.
- Designed and implemented a PostgreSQL database schema for storing data in a structured way.
- Created a map generation tool to visualize location data using Folium.
- Build a Django backend and React frontend to serve map data via web interface.

EDUCATION AND TRAINING

Masters in Computer Simulation in Science
University of Wuppertal, Germany
Oct 2022 - Present

Bachelor in Computer Science and Engineering
American International University-Bangladesh, Bangladesh
Jan 2017- Nov 2020

Technical SKILLS

- **Programming and Frameworks:** C++, Python, Java, C#, Golang, OpenCV, TensorFlow, PyTourch
- **Software Engineering:** Object Oriented Programming, architecture and design pattern, Scalable system design, integration testing, CI/CD.
- **Robotics and AI:** Computer vision pipeline, ML model training and deployment, manufacturing automation system.
- **Databases and DevOps:** MySQL, PostgreSQL, Oracle, DuckDB, Git, Linux, ETL pipeline
- **Tools and processing:** Agile methodologies, code reviews, source control, build automation, performance profiling.

Projects

- **Next-Gen Road simulator (2025):** Used Geological data and advanced algorithm to minimize travelling time on German highways https://github.com/NH-Uday/Roadsimulator
- **FNN for Text Recognition (2020):** Used Matlab code to develop a Feedforward Neural Network for text recognition purposes. https://github.com/NH-Uday/Feed-Forward-Neural-Network-for-Text-Recognition
- **Renewable Powerplant Data Analysis (2023):** Analyzed renewable powerplant data to optimize energy using ML forecasting https://github.com/NH-Uday/Renewable-Powerplant-Data-Analysis

LANGUAGE SKILLS

- Bengali: Native
- German: A1 (A2 in progress)
- English: C1

Certificate

- Introduction to Big Data - Coursera
- Neural Network and Deep Learning - Coursera
- Internet of Things – AIUB Continuing Education Center

Research Experience

From Nature to UAV - A Study on Collision Avoidance in Bee Congregation
DOI: https://doi.org/10.5815/ijisa.2024.03.06
2018 – 2020

- Led a team of 3 in collecting and annotating video data of flying bees.
- Analyzed collision avoidance behaviours and proposed a UAV collision avoidance model.

Hobbies

Reading, Traveling and Football