NAZMUL HASSAN

Python Developer | Machine Learning & AI Engineer

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SUMMARY

Software Engineer with 3+ years of experience in backend development and a strong foundation in machine learning. Holds an M.Sc. in Artificial Intelligence from Queen Mary University of London, with a focus on Natural Language Processing. Skilled in Python, Django, FastAPI, and TensorFlow, with hands-on experience building AI agents using frameworks like MCP and n8n. Experienced in designing APIs, managing relational databases, and developing machine learning models through academic and personal projects. Passionate about leveraging technology to solve real-world problems and continuously growing as a developer.

TECHNICAL SKILLS

Languages & Machine Learning:

Python, TypeScript, Go (learning), SQL, TensorFlow, Scikit-learn, Keras, AI Agent (MCP, n8n)

Backend, Databases & Tools:

Django, FastAPI, RESTful APIs, Microservices, PostgreSQL, MySQL, Docker, Linux, GitHub

Frontend & Software Practices:

React.js, Next.js, Node.js, HTML, CSS, Tailwind CSS, Debugging, Data Structures & Algorithms (DSA), Agile

EXPERIENCE

Backend Python Developer

London, United Kingdom

TXTIV (Remote Freelance)

03/2022 - 08/2023

- Design and develop scalable backend systems using Django and FastAPI, ensuring high performance and reliability.
- Optimise RESTful APIs to improve frontend-backend communication, reducing response times by 20%.
- Design relational databases (PostgreSQL, MySQL) to support high-traffic operations with zero downtime.
- Debugged and optimised backend performance by resolving critical bottlenecks, improving data retrieval speeds.

Software Developer (6-Month FTC)

London, United Kingdom

Switz Energy (Hybrid)

07/2021 - 12/2021

- Designed and developed a custom CRM system using Django (backend) and React (frontend).
- Built secure, scalable RESTful APIs for handling customer data, service tracking, and workflow automation.
- Implemented user authentication, role-based access control, and real-time dashboards to support internal teams.
- Delivered the project 5 weeks early, meeting all business requirements and ensuring a smooth handover.

Junior Database Developer (Intern)

Chengdu, China

Molex

02/2019 - 07/2019

- Assisted in designing data models to organise over 20 datasets, improving data accessibility for analytics.
- Wrote and optimised SQL queries to improve database performance and support operational reporting.
- Collaborated with data engineers to develop scalable data structures and improve team workflows.

Junior Front End Developer (Intern)

London, United Kingdom

Team Oreo

09/2018 - 12/2018

- Assisted in developing and styling responsive web pages using HTML5, CSS3, and JavaScript.
- Contributed to building 10+ UI components and frontend features based on design mockups and team feedback.
- Supported user experience improvements by reviewing engagement data and suggesting minor interface updates.

EDUCATION

M.Sc. Artificial Intelligence
Queen Mary University of London (QMUL)

London, United Kingdom
09/2023 - 10/2024

- *Focus: Natural Language Processing (NLP), Machine Learning, Neural Networks and Deep Learning*
- *Research Paper: AI-Generated vs. Human-Written Content Detection*

B.Sc. Computer Science
University of East London (UEL)

London, United Kingdom
09/2017 - 10/2020

- Key Modules: Advanced Programming, Networks & Security, Data Structures, Algorithms

Computer Science
University of Electronic Science and Technology China (UESTC)

Chengdu, China
02/2019 - 07/2019

- *Focus: Advanced Databases, AI, and Algorithms*
- *Internship completed at Molex (Chengdu office)*

PROJECTS

Eye Disease Classifier (CNN & Vision Transformer)
Built deep learning models using TensorFlow to classify 10 eye diseases from a medical image dataset. Achieved up to 87% test accuracy. Included preprocessing, model training, and evaluation. [Source CNN] [Source Vision Transformer]

Fraud Detection in Credit Card Transactions
Built machine learning models (Logistic Regression, Random Forest, XGBoost, LightGBM) to detect fraudulent transactions. Performed exploratory analysis, and model evaluation using F1-score and AUC-ROC. [Source]

Plant Disease Detection Using Convolutional Neural Networks
Trained a CNN model on the Plant-Village dataset to classify multiple plant diseases, achieving 100% test accuracy. Covered image preprocessing, model training, and model deployment in TensorFlow. [Source]

RESEARCH PAPERS

AI Generated vs. Human Written Content Detection Tools
Research-based project focused on developing model to detect AI-generated content through linguistic and statistical analysis. [View The Paper]

TRAINING / COURSES

Machine Learning Scientist in Python by DataCamp   Python Data Structures & Algorithms by Scott Barrett

Harvard CS50's Programming with Python

REFERENCES

Julie Wall
Julie.Wall@uwl.ac.uk

MY LIFE PHILOSOPHY

The best among you are those who bring the greatest benefits to others. — *Prophet Muhammad (PBUH)*

FIND ME ONLINE

LinkedIn   GitHub (github.com/HassanNazmul)   Portfolio (nazmulhassan.dev)
(linkedin.com/in/nhassan96)