

# Sandeep Singh

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AWS Certified • Achieved 16+ Certificates in ML, DL and NLP Specialization

## Education

### University of Edinburgh

Sep 2020 – Jul 2024

Bachelor's of Science, Electronics and Computer Science (Upper Second Class)

### Help Academy, A-Levels

Jan 2019 – Jul 2020

3A\*, 1A (Maths, Further Maths, Chemistry, Physics)

Certificates: [CLF-C02](#), [ML](#), [DL](#), [NLP](#)

## Experience

### Pimato

Nov 2024 – Present

Full Stack Engineer

Kuala Lumpur, Malaysia

- Built features on the frontend and backend for Pimato's main platform, a global solution provider developing AI driven solutions to Maxis, Astro, Prudential and HrdCorp.
- Implemented scalable and maintainable infrastructure using Amazon Cloud Development Kit (CDK) to automate resource provisioning and streamline deployments
- Led development of microservices and APIs utilizing Vue.js, integrated with DynamoDB and AWS Lambda
- Led frontend development for deploying a chatbot on the Genflex and Dataflex team, integrating Amazon Textract to extract key information from customer documents. Successfully showcased the project at Malaysia's largest AI Summit, delivering a seamless and engaging UI/UX.
- Contributed to the teams CI/CD workflow focusing on developing a seamless user interface (UI) by implementing Vuetify across the website.
- Developed and deployed API endpoints to handle AJAX requests from the frontend, using Postman for testing and debugging API interactions.

### Outlier.AI

Sep 2024 - Dec 2024

LLM Tester

Remote

- Executed structured queries to evaluate LLM responses and provided detailed feedback to refine model accuracy.
- Focused on building better models in image classification (CNN), speech recognition (LSTM, GRU) and NLP, improving the performance of n-gram models and transformers
- Enhanced LLM performance on specific tasks by generating augmented data, leveraging Python, Tensorflow and scikit-learn for preprocessing and feature engineering.
- Improved F1 Score, precision and recall by enhancing my prompt engineering skills

### Find Gyms

Sep 2024 - Nov 2024

Freelance Full Stack Engineer

Kuala Lumpur, Malaysia

- Identified 5+ challenges that regular Malaysians experience when using gyms in Malaysia, such as lack of gym equipments, subscription based gyms are overpriced, and gyms often get too crowded
- Designed a full-stack web application with collaborations with 3 other gyms, utilizing HTML, Tailwind and JavaScript, deployed the frontend onto Vercel to improve code reusability and future maintainability
- Managed API keys and integrated Places and Maps JavaScript APIs from Google Cloud Console to display gym partnership locations into our website
- Designed ways to improve UI and ease of use in our website by implementing a chatbot, applying NLP functionalities using hugging face ollama model for dynamic Q&A on gym-related data to respond to user queries

## Projects

### FoodVision-Mini | *PyTorch, MLflow, pandas, Matplotlib, NumPy*

Jul 2024 – Sep 2024

- Developed an innovative image recognition program leveraging deep learning architecture such as VGG-16 and resnet50
- Deployed my model into Flutter and utilized advanced convolution neural networks (CNN) and transfer learning techniques to enhance model performance on specialized food image datasets reaching test accuracy up to 90%

### Pizza Drone Delivery System | *Java, JavaScript, CSS, JUnit*

Jan 2023 – Jun 2023

- Produced a solution to the travelling salesman problem by configuring greedy heuristic and Dijkstra's algorithm to search for optimal path of a successful delivery with the fastest routes.
- Applied Object-Oriented Programming (OOP) principles to produce a model which has the ability to search orders in a json file, figure out the optimal path to reach the destination, and return to the user
- Integrated an O(n) time complexity system which group orders, favoring maximum profit and close proximity

## Technical Skills

**Languages** Vue.js, Express.js, Node.js, Python, Java, JavaScript, React

**Technologies** TensorFlow, Vercel, PostgreSQL, Render, Flutter, Hugging Face, Git, Docker

**Libraries** Vuetify, NumPy, scikit-learn, pandas, Matplotlib, MLflow