

# Sandeep Singh

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Achieved 16+ Certificates in Coursera's Machine Learning, Deep Learning and NLP Specialization

## Education

### University of Edinburgh

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

Sep 2020 – Jul 2024

### Help Academy, A-Levels

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

Jan 2019 – Jul 2020

Certificates: [Machine Learning Specialization](#), [Deep Learning Specialization](#), [NLP Specialization](#)

## Experience

### Pimato

Full Stack Engineer

Nov 2024 – Present

Kuala Lumpur, Malaysia

- 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
- Contributed to the teams continuous integration and continuous deployment (CI/CD) workflow focusing on developing a seamless user interface (UI) by implementing Vuetify across the websites as well as, implementing trigger word detection feature in chatbots
- Utilized Postman API to configure and test Ajax requests for debugging API interactions

### Find Gyms

Co-Founder, Freelance Full Stack Engineer

Sep 2024 - Nov 2024

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 HTML, Tailwind and JavaScript to improve code reusability and future maintainability and has collaborations with 3 other gyms in Malaysia, which includes information about the kind of facilities, number of users across the day and fixed membership prices for each gym
- 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 langchain\_ollama for dynamic Q&A on gym-related data to respond to user queries

### Outlier.AI

LLM Tester

Sep 2024 - Dec 2024

Remote

- Produced a set of queries to an LLM, quantified model's output response and provided feedback in parts where model response was lacking
- Focused on building better models in image classification (CNN), speech recognition (LSTM, GRU) and NLP, improving the performance of n-gram models and transformers
- Improved F1 Score, precision and recall by enhancing my prompt engineering skills

## 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, resnet50 and efficientnet.b2
- Deployed my model into Flutter with an MVP architectural pattern which can be used on all devices
- 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** Python, Java, JavaScript, React, Vue.js, SQL, Bash, LaTeX

**Technologies** TensorFlow, Jupyter Notebook, Android Studio, Vercel, Flutter, Hugging Face, Git, Docker

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