James Binding - Software Engineer

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Technical Skills

Languages: Python, Java, PHP, JavaScript
ML & AI: scikit-learn, TensorFlow, NLP, Computer Vision, OpenCV, NumPy, Pandas
Tools & Version Control: Git, Linux

Experience

Web Developer, Netmatters, Wymondham (April 2021 – April 2025) – **PHP, JS, Java, Android**

- Developed and maintained codebases with a diverse set of coding languages.
- Designed and developed RESTful APIs.
- Designed and optimised relational database queries to improve system performance.
- Covered squad leadership responsibilities during periods of absence to help maintain project delivery and team coordination.
- Acted as a technical point of communication for developers requiring support across multiple projects and technologies.
- Collaborated with designers and project managers to translate business requirements into viable technical solutions.

Education

MSc Artificial Intelligence – Expected Distinction
University of East Anglia, (September 2025 - September 2026)

BSc (Hons) Strength and Conditioning Sciences – Second Class
St Mary's University, (September 2016 - July 2019)

Projects

Audio-Visual Speech Recognition System
Python

- Developed a multimodal speech recognition system combining audio and visual features.
- Extracted MFCC audio features and visual mouth ROI features.
- Applied DCT and PCA for dimensionality reduction.
- Implemented a CNN and MLP classifiers such as SVM.
- Compared and evaluated early and late fusion strategies.

Fake News Detection
Python

- Developed a text preprocessing pipeline (tokenisation, stop-word removal, lemmatisation and encoding)
- Implemented Bag-of-Words vectorisation, TF-IDF and LDA.
- Developed and trained MLP and CNN models.

- Achieved F1 score of 94.28% on an imbalanced dataset by implementing various NLP techniques and tuning hyper parameters.

Train Ticket Chatbot

Python

- Developed a intelligent chatbot that identifies the cheapest train ticket from natural language queries.
- Implemented NLP techniques to extract dates, times, station names, railcards and, passenger counts.
- Implemented and trained a CNN model to predict delay times using historical train journey datasets.
- A Rag was used to provide contingency routes to employees if there was an issue, such as track blockages, power outages etc.

American Sign Language (ASL) Classifier

Python

- Developed a computer vision system to classify American Sign Language gestures.
- The system uses both supervised and unsupervised machine learning models for comparisons.
- Supervised learning models comprised of a KNN, SVM and decision Tree.
- Unsupervised learning models comprised of hierarchical clustering and K Means clustering.
- Achieved 99.1% Accuracy using SVM models for ASL recognition through feature extraction and PCA-based dimensionality reduction.