Kapil Aminbhavi

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EDUCATION

The University of Manchester **Manchester, England**

MSc Advanced Computer Science: Artificial Intelligence

September 2021 – September 2022

Objective: Highly motivated and skilled recent graduate with a strong educational background in Artificial Intelligence, Machine Learning, Deep Learning, and Computer Vision. Seeking an entry-level position as a Machine Learning Engineer to apply my knowledge, passion, and skills in developing innovative solutions.

Areas of Interest: Machine Learning, Deep Learning, Text Mining, Natural Language Processing and Computer Vision.

Key Skills:

- Solid understanding of machine learning algorithms and techniques, including supervised and unsupervised learning, deep learning, CNN, and ensemble methods.
- Proficient in programming languages such as Python and libraries/frameworks like TensorFlow, Keras, and PyTorch.
- Familiarity with computer vision techniques, image processing, and feature extraction.
- Knowledge of natural language processing (NLP) techniques for text mining and sentiment analysis.
- Strong problem-solving abilities and analytical skills to tackle complex challenges.
- Excellent communication and teamwork skills honed through collaborative projects.

Dissertation and Coursework: An Ethereum-based Blockchain voting system using Truffle Suite, Metamask, and Ganache.

- Developed a secure and decentralized voting application using Ethereum blockchain technology. Employed tools such as Ganache, MetaMask, Truffle Suite, and Solidity. Utilized Ganache as a testing and development environment, simulating the Ethereum network's behavior for local deployment and interaction with smart contracts.
- The course involved applying machine learning algorithms to real datasets, evaluating their performance, and appreciating the practical issues involved. This course offered an overview of modern machine learning algorithms, theoretical foundations, and hands-on application experience. To compare and contrast methods for sentence segmentation, tokenization, part-of-speechtagging, syntactic parsing, and semantic representation. The course went deep into understanding the common cognitive robotics and machine vision algorithms, deep learning and computer vision.

Modern Education Society College of Engineering, University of Pune **Pune, India**

Bachelor of Engineering in Computer Science *August 2016 - December 2020*

PROJECTS

- **Seismic Prediction using Ensemble Learning: Predict magnitude using Random Forest Regressor with 83% accuracy.** Developed a seismic prediction model using ensemble learning techniques, specifically the Random Forest Regressor. Collected and pre-processed a dataset of seismic event records, including location, depth, and geological characteristics. Implemented the Random Forest Regressor to accurately predict seismic event magnitudes by capturing complex relationships within the data. Achieved an impressive accuracy of 83% by evaluating the model using regression metrics such as MAE and RMSE.
- **Signature Forgery Detection**: **Optical Character Recognition using CNN with 92% accuracy**. Developed a signature forgery detection system using OCR techniques and CNNs. Collected and pre-processed a dataset of genuine and forged signature images. Implemented a CNN architecture for accurate classification of signatures. Trained the model to learn discriminative features and differentiate between genuine and forged signatures.
- **Wine Quality Forecasting**: **Predict the quality and sales of wine before dispatch using Regression with 91.7% accuracy**. Developed a wine quality forecasting system using regression techniques to predict the quality and sales of wine before dispatch. Collected and pre-processed a dataset of wine samples, handling missing values, normalizing features, and removing outliers. Implemented a regression model.
- These projects showcased my proficiency in machine learning algorithms, ensemble learning techniques, computer vision techniques (OCR and CNNs), data preprocessing, feature engineering, model selection, and performance evaluation. They demonstrated my ability to work with real-world datasets, apply image processing and pattern recognition for classification tasks, and utilize regression analysis and forecasting techniques. These projects highlight my skills in data analysis, predictive modelling, deep learning, and decision-making for various domains such as seismic prediction, fraud detection, and wine quality forecasting.