Pooja Kotresh Halannavar

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Profile

A passionate Master's student in Data Science and Artificial Intelligence with strong skills in Data Analysis, Machine Learning and and a keen interest in Computer Vision. Strong analytical, problem solving, and communication skills, combined with confidence and a drive for continuous learning and innovation.

Skills

Languages: Python, Reactjs, HTML, CSS, JavaScript, SQL

Technologies: Visual Studio Code, FastAPI, Docker, MySQL, Pycharm

Machine Learning Libraries: TensorFlow, Scikit-learn, Pandas, Numpy, Pytorch, NLTK, Matplotlib

Education

Master's in Data Science and Artificial Intelligence Oct 2023 – present
Saarland University, Germany
Bachelor's in Computer Science (1.72/4) Aug 2017 – July 2021
PES Institute Of Technology & Management, India

Experience

Software Engineer, TATA Consultancy Services, India Oct 2021 – Aug 2023

- Developed reusable components using web technologies (React), and worked on backend part in Python.
- Designed automated unit and integration test infrastructure for code quality analysis of the application.

Full-Stack Development Intern, Srichid Technologies, India July 2020 – Oct 2020

- Implemented a full stack development project using Angular and Web Api.
- Developed the dashboards using HTML, CSS, Javascript and Python.

Projects

Data Selection and Fine Tuning Methods for Lipophilicity Prediction

- Fine-tuned a chemical language model on lipophilicity using supervised and unsupervised learning.
- Applied influence functions and alternative data selection (cosine similarity) with PEFT methods (LoRA, BitFit, iA3) to enhance model accuracy.
- Keywords: Pytorch, MLM, PEFT methods, Transformers

Violence Detection in Surveillance videos using Deep Learning

- Developed a deep learning-based violence detection system using transfer learning on DenseNet, SlowFast, and I3D models. Fine-tuned on a video dataset with four violence types, achieving 82.14% accuracy with SlowFast.
- Keywords: DL, Transfer Learning, 32 frames per video, SVM, FFNN

Image Caption Generator

- Developed an image captioning model using a pre-trained VGG16 for feature extraction and LSTM to generate captions word by word.
- Keywords: CNN(VGG16), LSTM, BLEU score

Others: Portfolio, Breast Cancer Prediction using CNN, Food Ordering Chatbot, EEG for Emotion Recognition, Handwritten Digits Recognition

Languages

English(C1), German(A2.1), Kannada, Hindi