

Sanivada Sai Chaitanya

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EXPERIENCE

Machine Learning Lead Teaching Assistant

Oct. 2021 – Dec. 2022

Univ.Ai

- Lead Office hours and Labs to coach students in various ML algorithms and data handling.
- Managed a team of 5 teaching assistants for multiple machine learning courses.
- Delivered a lecture on data visualisation using Matplotlib for approximately 150 students in total.

PROJECTS

Early Alzheimer's disease prediction | *Scikit-learn, pandas, matplotlib, Random Forests, Boosting*

Predicted the risk of Dementia and Alzheimer's using clinical, cognitive testing, neuropsychological data from Open Access Series of Imaging Studies (OASIS); Conducted EDA (Exploratory Data Analysis) and trained various models such as AdaBoost, Random Forests, Ordinal Regression, Feed forward Neural Networks to achieve a maximum test accuracy of 79% with a weighted recall score of 0.80

Distracted Driver Detection | *Tensorflow, Keras, CNNs, Fine-Tuning*

Trained Convolutional Neural Networks (CNNs) to detect the driver's actions using images; Fine-tuned EfficientNetB3 model and analyzed model's predictions using Saliency Maps & Grad-CAM; Achieved an accuracy score of 60% when tested against real-world images. Built a web application using stream-lit to analyze in-car camera footage and classify the driver's actions.

CNNs + LSTMs to predict heat release rate during fire accidents | *LSTMs, RNNs, Tensorflow data pipeline*

Trained a CNN LSTM model to predict heat release rate using video data from NIST. Model architecture involved using time distributed CNN layers on top of LSTM layers.

Unpaired Image-to-Image translation using Cycle-GANs | *Generative Adversarial Networks*

Reviewed the Cycle-GAN research paper and Implemented the model from scratch in Python. Built the model architecture, loss functions, custom training function and input data pipelines using Tensorflow, Keras. Trained a model with CycleGAN architecture to translate real world images to how they would look as in a specific art style.

EDUCATION

Indian Institute Of Technology, Madras

Chennai, TN

Bachelor of Technology in Ocean Engineering and Naval Architecture

2023

TECHNICAL SKILLS

Programming Language & Libraries: Python, Tensorflow, Keras, SQL, scikit-learn, pandas, NumPy, Matplotlib

Tools: Git, Selenium, Beautiful Soup

ML Methodologies : Classical Machine learning, Tree based models, Feed forward Neural Networks, CNNs

Other Data skills : EDA, Visualisation, PCA, Clustering, Data cleaning

Operating Systems: Linux(Ubuntu), Windows

ADDITIONAL INFORMATION

Scholastic Achievements and Awards: Secured All India Rank 4017 (97.40 percentile) and 4973 (99.57 percentile) in JEE Advanced and JEE Main respectively-2018. Secured Zonal Excellence Award 10th rank in Andhra Pradesh and Telangana zone and 283th Internationally, National Cyber Olympiad by Science Olympiad Foundation-2017.

Volunteering: Worked with Team Everest NGO supporting fundraising to support education for Orphans

Interests: Successfully completed the 5 KM run organised by the Department of Management Studies, IIT Madras.