VAISHNAV PANUGANTI

AI & ML ENGINEER

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CAREER OBJECTIVE

To work on a challenging job profile which provides an opportunity to enhance my technical skills, knowledge and career growth. Looking for opportunities as an aspiring fresher which would provide me an insight into new aspects of career growth .

EXPERIENCE

Procorp Technologies, Hyderabad— *Intern*

2 JANUARY 2021 - 1 FEBRUARY 2021

Performed a project titled - Lung Cancer Detection from CT scan using *support vector machine* .

Pantech Solutions Pvt. Ltd., Chennai— *Intern*

SEPTEMBER 2020 (Virtual)

Involved in MATLAB programming.

Electronic Corporation of India Ltd., Hyderabad— *Intern*

JULY 2019

Performed a project titled - Design And Implementation of elevator controller using FPGA.

SKILLS AND EXPERTISE

ALGORITHMS -Linear Regression , Logistic Regression, Decision Trees, Random Forest, Support Vector Machine, KNN, K-Means Clustering, Bagging and Boosting.

STATISTICAL SKILLS -Dimensionality reduction, EDA, Data Visualization, Feature selection and Feature extraction.

DEEP LEARNING - Neural Networks, Back propagation, CNN, Auto Encoders, Transfer Learning.

LANGUAGE MODELS -RNN, GRU, LSTM, Seq 2Seq, Transformers, BERT.

TECHNICAL SKILLS -Python, MATLAB, MySQL, R, Microsoft Excel.

LICENSES AND CERTIFICATIONS

AI-3 : Language Models
Harvard University (Univ.AI) Aug 2022

Best Project Certificate : DS1 Data Science Basics
Harvard University (Univ.AI) June 2022

EDUCATION

Lovely Professional University, Punjab.
(8.7 CGPA)
2022 - 2024

Master of Technology -AI & ML

Aurora's Technological and Research Institute , Hyd.
(7.15 CGPA)
2017 - 2021

Bachelor of Technology -ECE

LANGUAGES

English, Hindi , Telugu, Tamil.

DS1 : Data Science Basics
Harvard University (Univ.AI) June 2022

Best Project Certificate : Convolutional Neural Networks.
Harvard University (Univ.AI) April 2022

Global Master Certificate in Business Analytics.
Michigan State University Sept 2021

Python for Machine Learning.
Great Learning Jan 2022

ACADEMIC ACHIEVEMENTS AND CERTIFICATIONS

IETE Student Forum Certificate, by Aurora's Technological and Research Institute, Hyderabad.
-Membership Certification.
FROM NOVEMBER 2018 TO NOVEMBER 2021

The Role of Artificial Intelligence & Machine Learning in the Development of Society , by IETE Students Forum . - 2nd Prize Winner.
2 NOVEMBER 2019

Artificial Intelligence with Machine Learning Workshop, by Technophilia Solutions and Microsoft at IIT-Hyderabad . - Certificate of Participation.
19 , 20 JANUARY 2019

Innovators Challenge 2019, by Literacy Helping Hands on Radar using arduino uno and ultrasonic sensor. -Certificate of Appreciation.
7 APRIL 2019

Appointed as Student Chief coordinator in Mobile Making & Robotics Workshop, by SYMPOSIUM -IIT Mumbai. -Certificate of Appreciation.
23, 24, 25 SEPTEMBER 2019

PROJECTS

1. Higgs Boson Challenge

Goal : To improve the recall and f1 score.

Description : Performed data preprocessing and EDA, used base models like logistic regression and decision tree to improve f1 score and recall.
Ensemble models like bagging and gradient boosting and random forest (up sampling and downsampling).

2. Brain Tumor Segmentation and Classification

Objective: To segment the tumor part from MRI images and identify the kind of brain tumor from categories: meningioma, glioma, pituitary tumor.

Description: Worked on a dataset containing 3064 t1-weighted contrast enhanced images 515 x 512 x 1 of 233 patients with 3 types of tumors.

1. Meningioma (708 slices)
2. Glioma (1426 slices)
3. Pituitary tumor (930 slices)

Performed base models for classification like FFNN and CNN, used saliency map to get accurate tumor part and losses like dice loss, focal loss and IOU metric.

For classification we used models like base model with FCNN, base model with CNN, simple UNET, UNET with batchnorm (calculated accuracy).

For Segmentation we used models like basic autoencoder, simple UNET, UNET with batchnorm, Transfer Learning - UNET (calculated loss and Mean IOU).

3. Game Recommendation System

Objective: To build a recommendation system for recommending games.

Description : Performed EDA to analyze the dataset, the evaluation metric considered was **hit-rate**. Base models used were Baseline popular model, CF model, simple CB model, Hybrid model, User - User model (cosine sim).

Complex Models like CF model (cosine sim weighted average), user centric content based (with hyper parameter tuning), CF - matrix factorization (embedding), content based collaborative filtering.

4. Named Entity Recognition

Objective: The primary objective is to locate and classify named entities in text into predefined categories.

Description : The dataset taken is wiesp_2022 .
The dataset was imbalanced so we plotted the tags based on how frequently they are occurring. Models performed were SimpleRNN, GRU and LSTM. Calculated the Accuracy, f1-score, precision and recall.