

Pranay Anandbabu Obla

+91-8123157181 | apranayobla@gmail.com | linkedin.com/in/pranay-obla | github.com/pranay-obla

EDUCATION

Vellore Institute of Technology – Vellore, India <i>Bachelor of Technology in Computer Science and Engineering and Business Systems</i>	Sep 2021 – Present GPA – 9.01/10.00
The Deens Academy – Bengaluru, India <i>Senior Secondary High School, CBSE (11-12th Grade)</i>	May 2019 – Jul 2021 Grade – 94%
Ryan International School – Bengaluru, India <i>Secondary High School, CISCE (9-10th Grade)</i>	Apr 2017 – May 2019 Grade – 93%

INTERNSHIPS AND TRAININGS

Academic Intern <i>National University of Singapore</i> <ul style="list-style-type: none">Acquired skills for Data Analytics and Deep LearningBuilt Object Detection Models for real-time lane monitoring, performed a comparative analysis of the models, and deployed the best performing model using streamlit	Dec 2023 – Jan 2024 Singapore, Singapore
Data Science Intern <i>WinTLT Technologies</i> <ul style="list-style-type: none">Annotated the dataset used in Computer Vision for Training and Testing purposes to Detect Theft in Retail EnvironmentsPerformed a comparative analysis on the performance of YOLOv7 and YOLO NASResearched on Post-training Quantization aimed at optimizing the YOLOv7 model	Aug 2023 – Oct 2023 Bengaluru, India

TECHNICAL SKILLS

Developer Tools: Git, Amazon Web Services
Languages: C, C++, Java, Python, SQL, HTML, CSS, PHP, JavaScript
Frameworks: Flask, Django, Streamlit
Scientific Libraries: NumPy, Pandas, Matplotlib, Seaborn, OpenCV, Scikit-Learn, Tensorflow, PyTorch, Ultralytics, NLTK, Transformers
Broad Domain Skills: Machine Learning, Neural Networks, Computer Vision, Transfer Learning

PROJECTS

Holistic Sentiment Analysis <i>Python, OpenCV, Dlib, Librosa, Tensorflow</i> <ul style="list-style-type: none">Converted a video file into multiple image frames and a corresponding audio track, and further converted the audio track into a text transcriptEvaluated facial expressions, mainly eyes and lips, using the image framesAssessed tonal expressions using the audio track and performed descriptive analysis on the text transcriptComputed the weighted average from all three segments (image, audio, text), and made final predictions on the sentiment	Oct 2024 – Nov 2024
Automated Machine Learning Workflow <i>Python, Pandas, Scikit-learn, Click, PyPI</i> <ul style="list-style-type: none">CLI App to Automate the Machine Learning Workflow and compare between models for supervised tasksEnabled users to input a clean dataset file via CLI, automatically output trained model files, provide model comparison metrics, and recommend the best model for useUploaded the app as an open-source Python Module on PyPI and can be installed using pip	Sep 2024 – Sep 2024
Smart IoT Dustbin <i>Arduino, Camera Module, Python, OpenCV, PyTorch</i> <ul style="list-style-type: none">Developed a Waste Disposal System, which classifies waste as Organic or Recyclable and automatically segregates them into their corresponding partitions in the DustbinTrained a Deep Learning Model for Image ClassificationUtilized Arduino Uno as a central controller for the embedded system	Aug 2024 – Sep 2024

PUBLICATIONS

Enhanced Miss Forest for Time Series Imputation in Wind Speed Prediction using Deep Learning (*Yet to be submitted to journal*)

- Collected and preprocessed 160m wind power data from the NIWE website, covering the Gulf of Khambhat off the Gujarat coast from Dec 2017 to Nov 2018
- Applied the Miss Forest algorithm for data imputation in the time series dataset
- Performed wind power predictions using BO Stacked LSTM, Deep LSTM, CNN 1D, and CNN-LSTM models

Machine Learning Approach for the Prediction of Tensile Strength of Carbon Nano Tubes Re-enforced AA2024 by Friction Stir Welding and Friction Stir Processing (*Submitted to journal*)

- Collected tensile strength data from welded Aluminum 2024 alloy samples using a Universal Testing Machine
- Optimized welding parameters using the Taguchi method and genetic algorithm
- Performed tensile strength predictions using Gradient Boosting Regression, TPOT Regression, and Artificial Neural Networks
- Identified the most significant features and optimal feature combinations using Recursive Feature Elimination, Exhaustive Feature Selection, and Relief for feature importance analysis

WORKSHOPS

IC-ETITE Conference – IEEE and ACM

Feb 2024

Vellore Institute of Technology

Vellore, India

- Attended a session on the Impact of AI and Chip Design Labs and their research prospects
- Attended a session on Generative AI powered assistants and Coding Companions

AWS Training – Amazon Web Services

Dec 2023 – Jan 2024

National University of Singapore

Singapore, Singapore

- Attended lectures on Big Data Analytics and Cloud Computing using AWS
- Gained insights into analytics and visualization using QuickSight
- Built a Deep Learning Model, using Amazon Product Review dataset, to perform Sentiment Analysis, and deployed it using AWS SageMaker

COURSES AND CERTIFICATIONS

Machine Learning Specialization

Jan 2024

DeepLearning.AI, Stanford University (Coursera)

Data Analysis using Python

Sep 2023

University of Pennsylvania (Coursera)

Data Science Math Skills

Sep 2023

Duke University (Coursera)

Introduction to Statistics

Sep 2023

Stanford University (Coursera)

Introduction to Git and GitHub

Sep 2023

Google (Coursera)

EXTRACURRICULAR ACTIVITIES

Reached the Final Round of DevJams Hackathon by Google Developer Student Club VIT	2024
Participated in Cicada 3310 by IEEE Computer Society VIT	2024
Secured 1st position in Texpedition Hunt by Digit Squad VIT	2023
Secured 4th position in CodeZap Competitive Programming Event by ISTE VIT	2022
Secured 4th position in Hybrid Cryptic Hunt by ACM VIT	2022
Ranked in the top 50 at the CookOff Competitive Coding Event by CodeChef VIT	2022
Participated in Comicon Event by The Comedy Club VIT	2022
High School Basketball Team Player at The Deens Academy	2019–2020
National Topper in Computer Applications ICSE Board Examination	2019
Silver Medal in International Olympiad of Mathematics	2018
High School Basketball Team Player at Ryan International School	2017–2019