

SHARATH PAI

FRONT END DEVELOPER & ML ENGINEER

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Examination	Majors	Institute	Year	CPI/%
Graduation	Electronics & Communication	D.J. Sanghvi College of Engineering	2020-2024	7.6
Intermediate	Science	Patkar Varde College of Arts & Science	2018-2020	83.23
Matriculation	Science	Dr. S. Radhakrishnan Vidyalaya	2006-2018	90.80

PROFESSIONAL EXPERIENCE

Machine Learning Intern | Intern Career

Oct 2023 - Present

- Developed and fine-tuned Machine Learning models resulting in 70% classification accuracy.
- Utilized R and its essential libraries addressing challenges like outliers, missing values and dummy variables.
- Produced data visualizations and enhanced model performance through data preprocessing and feature engineering.

Web Development Intern | Suvidha Foundation

Sep 2023 - Oct 2023

- Developing a **MERN Stack** website for patients to remotely monitor their health.
- Used the **Healthie's Scheduling API** for scheduling appointments with doctors nearby.
- Node MVC Architecture** is used to create and integrate the Frontend and Backend of the website.

PROJECTS

Data Science & Machine Learning

Cats & Dogs Classifier using Deep Learning | R

Oct 2023

Self Project

[Project Link](#)

- Utilized a dataset of about **25,000 images from Kaggle** for the training and testing of the binary classifier.
- The input data was augmented using **Tensorflow** and **Keras** functions and then fed to the Model.
- The training model had a **Convolutional layer** followed by Max Pooling Layer and fully connected neural network.

Analysis of Movies | R

Oct 2023

Self Project

[Project Link](#)

- We predict the **Box Office Collection** (Regression) & **Oscar Recognition** (Classification) using **Decision Trees & SVM**.
- In the **Regression** model, the **Random Forest** model provides the least error rate of **43 million**.
- In the **Classification** model, the **Bagging Ensembling Technique** provides the highest accuracy of **67.28%**.
- In the **SVM Analysis**, we get a **Linear** relationship of our classification model with an accuracy of **61.68%** for **Cost=10**.

House Price & Sales Prediction | R

Apr 2023

Self Project

[Project Link](#)

- Utilized the **Boston Housing dataset** to predict **House Price** (Regression) and its **Sales in 3 months** (Classification).
- In the **Regression** model, we got the best **RSS** of **1.049166** with **Lasso Shrinkage Method**.
- In the **Classification** model, we got the best accuracy as **66.6%** from Linear **Discriminant Analysis** model.

Development

Science Mission Website | ExpressJS, Handlebars

Ongoing

Science Mission, Dallas, USA

(Expected by Mar '24)

- Creating a freelance website that contains several articles related to science along with the videos as remedy.
- Each article has its own category and the user can filter out the articles based on their choice of category.
- I am creating the **backend** routes using **ExpressJS** and using the **Handlebars** template engine for the **design**.
- The **Node MVC Architecture** will be used for integrating the frontend and the backend.

Blogpage | ExpressJS, Handlebars

Sep 2023

Self Project

[Project Link](#)

- Created a blogpage in which showcase my written blogs.
- I am thinking of converting this website to a **dynamic website** in which the user can create and publish their own blogs in which the data can be dynamically passed through a database, preferably Mongoose.

Swift UnderGrads Website | ReactJS

Jul 2023

Swift UnderGrads

[Project Link](#)

- Developed a fully responsive **Frontend** educational website for our community which helps students in getting their desired study material.
- It is a static website and further I am planning to create a portal for various events conducted by the team and a **blockchain** powered **payment gateway** for secure transactions.

PUBLICATIONS

Predictive ML for Educational Decisions

Nov 2023

International Conference on Emerging Research in Computational Science

- Using supervised learning algorithms, we analyze various trends revolving Engineering admissions.
- Created a custom dataset from scratch involving around 400 observations of 17 variables for training and test sets.
- Referred model architecture from **Comparison of Regression Models for Prediction of Graduate Admissions** paper.
- Evaluation was done by finding most significant features and noting its effect on metrics (MSE, R², Accuracy).

Audio Source Separation as applied to Vocals-Accompaniment Separation

Mar 2022

DJS Strike

ISBN: 978-93-5578-944-0

- Built a system for extracting the vocals from tracks composed of vocals, instruments and computerized sound effects.
- The training dataset is composed of the tracks for the composite 'mix' and the accompanying vocals.
- The output audio is obtained by **postprocessing** this spectrogram using the inverse short-time **Fourier transform**.

TECHNICAL SKILLS

Programming	C, JavaScript, R, Solidity, SQL
Development	Bootstrap, ExpressJS, Handlebars, NodeJS, ReactJS
Data Science	Keras, Tensorflow
Design	Figma, Illustrator, Photoshop, Wordpress
Tools	Git, GitHub, MySQL, VSCode

KEY COURSES UNDERTAKEN

Mathematics and Statistics

- Calculus, Probability, Statistics, Data Preprocessing, Regression Models, Classification Models, Ensemble Techniques, Support Vector Machines, Artificial Neural Networks, Convolutional Neural Networks, Transfer Learning, Time Series

Computer Science

- Structured Programming Approach, Data Structures and Algorithms, Operating Systems, Computer Networks

POSITIONS OF RESPONSIBILITY

Founder & Tech Lead

Feb 2022 - Present

Swift UnderGrads

- A community running of telegram, we aim to help **MHT-CET aspirants** by guiding them regarding admission process.
- I lead a **team of 12 members**, all belonging to different areas in Maharashtra. My job is to mentor aspirants and look after the social handles.
- We conduct various **webinars** to help students with their studies and make them clear about the admission process and further career opportunities. Till now we have helped **1000+** students in their journey.
- I also **created a website** which helps students to get their desired study materials.

Head of Public Relations & Social Media

Nov 2021 - Apr 2023

DJSCE IETE

Head of Graphics

Mar 2022 - Oct 2022

DJS eXpress

ACHIEVEMENTS & CERTIFICATIONS

- **Smart India Hackathon** 2023 finalist.
- Runner Up in **DJS Strike** Innovative Project Development 2022 Competition.
- Finalist in Pixel Paranoia UI/UX Hackathon.
- Completed 30 Days of **Google Cloud**.
- Certification in 30 Days of **Solidity** Challenge.
- 5 stars in **Hackerrank C**.