

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 | Feynn Labs

Nov 2023 - Present

- Developed an AI based Product/Service Prototyping for Small Businesses.
- Performed bio-tech Market Segmentation Analysis using Machine Learning and Data Analysis.
- Developed a prototype and product service for Business/Financial Modelling.

Machine Learning Intern | Intern Career

Oct 2023 - Nov 2023

- 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%.

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.

- 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, Python, R, SQL
Development	Bootstrap, ExpressJS, Handlebars, NodeJS, ReactJS
Data Science	NumPy, Pandas, Scikit-Learn, Seaborn, Tensorflow
Design	Figma, Illustrator, Photoshop, Wordpress
Tools	Git, GitHub, MySQL, VSCode

KEY COURSES UNDERTAKEN

Mathematics and Statistics

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

Computer Science

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

POSITIONS OF RESPONSIBILITY

Founder & Tech Lead

Feb 2022 - Present

Swift UnderGrads

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**.