



HARISH KUMAR M V

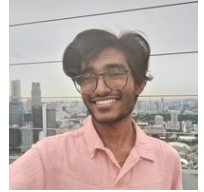
B.E. - Computer Science & Engineering

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BRIEF SUMMARY

Currently pursuing a Bachelor's degree in Computer Science and Engineering, I possess a strong proficiency in essential programming languages like C, Python, and Java, along with expertise in web development technologies such as HTML, CSS, and JavaScript. Demonstrating versatility, I've developed conference websites and online games, showcasing my ability to create engaging web experiences. Additionally, my involvement in the BAFO project integrates HTML, CSS, JavaScript, and React Native, addressing real-world accessibility challenges. I've also undertaken diverse machine learning projects, leveraging advanced techniques like linear regression and neural networks. Engaged in an ongoing research internship, I continue to deepen my understanding of cutting-edge technologies. My portfolio includes dynamic gaming applications and efficient timetable management systems, reflecting my adaptability and commitment to practical solutions.

KEY EXPERTISE

Python C DBMS Java Java Swing SQL ML Image Processing Text-to-Speech html css javascript
ReactJS React Native Deep Learning Firebase MongoDB MYSQL

EDUCATION

Sri Sivasubramaniya Nadar College of Engineering (SSN), Chennai

2021 - 2025

B.E. - Computer Science & Engineering | CGPA: 8.40 / 10

CS Academy, Erode

2021

12th | CBSE | Percentage: 96.20 / 100

CS Academy, Erode

2019

10th | CBSE | Percentage: 95.80 / 100

AWARDS AND SCHOLARSHIPS

- Second Runner Up- Paper Presentation at Mathophilia 2022
- Best Entrepreneur Award
- Certificate of Excellence and Merit
- Altair Rapidminer Datascience Contest-BITS Pilani Consolation
- Zenith Hackathon-1st Runner

INTERSHIPS

Diagno Intelligent Systems Pvt Ltd

01 Jul, 2024 - 31 Jul, 2024

Image Processing Intern

Key Skills: AIML Deep Learning Image Processing Image Segmentation Pytorch

During my paid internship at Diagno Intelligent Systems Pvt Ltd, I specialized in medical image processing with an emphasis on chest X-rays. My key contributions included manually annotating X-ray images to prepare datasets and developing a deep learning U-Net model for bone segmentation. This role enhanced my practical skills and provided valuable insights into the application of deep learning in medical imaging.

PROJECTS

BAFO-Bus Assist For Ophthalmologic Individuals

Team Size: 2

Key Skills:

ml image processing opencv tesseract python yolov7 Firebase react native html css javascript

Led development of wearable glasses integrating a real-time video camera and YOLOv8 model within a mobile app for bus detection, enhancing navigation for visually impaired individuals. Designed and implemented a destination verification system and GPS tracking for accurate route planning and disembarking assistance, significantly improving public transportation accessibility and user independence.

University Exam Timetable Management System

The primary objective of this project was to create an optimized approach for scheduling comprehensive university examination timetables, which included the coordination of arrear exams and shared courses. The project also entailed the resolution of various inherent constraints. To accomplish this, I devised a proprietary algorithm tailored to the project's unique demands.

Textile Inventory Management System

Team Size: 3

Key Skills: dbms sql java swing

The primary goal of this project was to conceive and develop a user-interface-driven textile inventory management application catering to the specific requirements of the textile industry. This comprehensive application streamlines the management of orders, shipments, customer data, and product specifics. Leveraging SQL for robust database management and Java Swing for creating an intuitive user interface, I successfully contributed to the development of this application. In addition, I played a pivotal role in designing and launching a dedicated website for our textile company.

Checkers Game AI Algorithm Analysis

Key Skills: AI pygame

I conducted in-depth analyses comparing the Minimax and Alpha-Beta Pruning algorithms in Checkers, revealing Alpha-Beta Pruning's superior efficiency in achieving game goals. Notably, Alpha-Beta Pruning demonstrated quicker outcomes, requiring fewer moves to secure victory and obtain the first king coin compared to Minimax. The findings underscore my expertise in algorithmic optimization and strategic decision-making in AI, showcasing a practical understanding of efficiency and adaptability in complex gaming environments.

Tomato Dataset - Data preprocessing Analysis

Key Skills: opencv numpy image processing

Conducted a comprehensive analysis of tomato image recognition using a diverse dataset and various preprocessing techniques, including histogram equalization variants, contrast stretching, grayscale conversion, and blurring. Evaluated methods to enhance recognition accuracy, presenting findings on accuracy metrics and technique effectiveness. Utilized Python, OpenCV, and NumPy to develop an image preprocessing pipeline, contributing to agricultural image processing and improving crop monitoring and management practices.

DataScientist Salary Prediction 2024

Mentor: Dr.Lokeshwari Y

Key Skills: rapidminer ml deep learning

Developed and analyzed salary prediction models for the Data Science field using machine learning and regression algorithms, including Linear Regression, Gradient Boosting, and Deep Neural Networks. Employed RapidMiner and Optuna for model training and hyperparameter optimization. Achieved superior performance with the CatBoostRegressor model, attaining an RMSE of 0.0555 and an R2 score of 98.67%. Recognized in the Altair Rapidminer Data Science Contest at BITS Pilani. Research paper pending publication.

ChefGPT

Key Skills: HTML CSS JAVASCRIPT Firebase NodeJS ML DL

Developed an AI-based chatbot and food community platform to streamline meal planning and cooking assistance, promoting inclusivity and diversity. Utilized HTML, CSS, JavaScript, Node.js, and integrated Language Models for natural language interaction and personalized recipe recommendations. Enhanced the recommendation system with collaborative filtering techniques, including k-means clustering, cosine similarity, neural collaborative filtering, and matrix factorization. Aimed to promote health, wellness, and a vibrant online community for recipe sharing and support.

PUBLICATIONS / RESEARCH / WHITE PAPERS

Emotion Classification using Optimized Features and Ensemble Learning Techniques for EEG dataset

17 Nov, 2023

ICSCN International Conference Sustainable Communication Networks and Application | Mentor: Dr. S Kavitha | No. of Authors: 4
I led a pioneering research project on real-time emotion recognition from EEG signals in Brain-Computer Interface (BCI). Employing diverse ensemble learning algorithms, including Random Forest, LightGBM, Extra Tree, Gradient Tree, XGBoost, AdaBoost, and Bagged Decision Tree, I effectively classified positive, negative, and neutral emotional states in a Kaggle-sourced EEG dataset. Feature optimization through Pearson Correlation Coefficient and Mutual Information techniques yielded exceptional results. Notably, Gradient Boosting Tree, XGBoost, and Extra Tree achieved accuracy rates surpassing 99%, while LightGBM demonstrated superior performance with an accuracy of 99.81%. This underscores my expertise in innovative research, algorithm selection, and data analysis at the intersection of neuroscience and machine learning, showcasing my ability to drive successful outcomes in complex projects.

ASSESSMENTS / CERTIFICATIONS

Business Intelligence & Analytics

Cyber Security and Privacy

EXTRA CURRICULAR ACTIVITIES

- o Entrepreneurship Event Organisation
- o YRC Volunteer

PERSONAL INTERESTS / HOBBIES

- o Content writing
- o Painting
- o Making paper crafts, wealth out of wastes and Origami
- o Interested in music

PERSONAL DETAILS

Gender: Male

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Emails: harish2110116@ssn.edu.in , harish18.1.2003@gmail.com

Date of Birth: 18 Jan, 2003

Known Languages: English,Tamil

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