BHARATH KUMAR RAJESH

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EDUCATION

Pace University, Seidenberg School of Computer Science and Information Systems — New York, NY
Master of Science (MS) in Computer Science | **Concentration**: Machine learning — May 2026

Jyothy Institute of Technology — Bangalore, India
Bachelor of Engineering in Computer Science | **Concentration**: Machine Learning — May 2024

TECHNICAL SKILLS

Programming Languages: Python, SQL, Java, C++
Database Management: MySQL, MongoDB, PostgreSQL, SQLite
Software / Tools: TensorFlow, PyTorch, Scikit-learn, Jupyter, Git, Docker,Keras, NumPy, Pandas, NLTK, OpenCV, Algorithms
Research Focus: Literature reviews, experimental design, statistical modeling
Cloud & DevOps: AWS, Google Cloud Platform, Azure, CI/CD pipelines, Kubernetes, Docker

PROFESSIONAL EXPERIENCE

Let's be the Change — Bengaluru, India
Software Development Intern — Sept 2023 – May 2024

• **Spearheaded** the development of a multi-platform digital solution using Flutter and React, **creating** an intuitive interface for administrators and optimizing community management for usage by 1,000 users, enhancing user experience by 30%**.**
• **Individually** built an app and dashboard from scratch, streamlining operational processes and improving administrative functionality, resulting in a **40%** increase in efficiency and scalability.

Compsoft Technologies — Bengaluru, India
Machine Learning Intern — Aug 2023 – Sept 2023

• **Developed** a Twitter sentiment analysis web app using Flask, MySQL, and Tweepy, providing user authentication and visualizing sentiment results from over 50,000 tweets, offering insights into public opinions during the COVID-19 pandemic.
• **Implemented** sentiment analysis to fetch and analyze tweets based on keywords, visualizing results with pie charts, helping users understand public emotions and opinions with **85% accuracy**.

Alltramatic — New York (Remote)
Software Engineering Intern — Mar 2023 – Apr 2023

• **Managed** web automation with Selenium and **implemented** SMTP protocols, **enhancing** proficiency in technology applications like geo fencing and **alerting** clients and stakeholders.
• **Administered** satellite imagery and **applied** Python programming, **contributing** to skill development in effective technology utilization and diverse application handling, increasing productivity by 20%.

RESEARCH PUBLICATIONS

A Deep CNN-Based Approach for Identifying Medicinal and Edible Plants in the Western Ghats Region , Published : Dec 2023
• Authored a paper detailing a deep convolutional neural network approach for plant identification, aiming to advance research in medicinal and edible plant recognition within the Western Ghats region using CNN with more than 93% accuracy, contributing to the 'Atlantis Highlights in Computer Science (AHCS)' series by Atlantis Press, Springer Nature.

Driver Drowsiness Detection using AI, Published: Nov 2023
• Published a research article in the International Journal of All Research Education and Scientific Methods (IJARESM), exploring AI-based techniques for detecting driver drowsiness and enhancing road safety by 90% through advanced detection methods.

ACADEMIC PROJECTS / PERSONAL PROJECTS

Customer Churn-for-business
• **Deployed** machine learning models such as Logistic Regression, K-Nearest Neighbors, and Gradient Boosting, **assessing** performance using k-fold cross-validation, **aiming** to predict customer churn with high accuracy.
• **Emphasized** Gradient Boosting Classifier and **utilized** evaluation metrics like confusion matrices and ROC-AUC curves, **enhancing** model evaluation and tuning skills applicable across different classification challenges.

Hand Gesture Recognition Collection and Testing
• **Developed** a real-time hand gesture recognition system using the cv zone library, **leveraging** a hand detection module and pre trained classification model to **interpret** gestures with accuracy.

Decentralized Machine learning
• Built a decentralized machine learning system supporting up to 10+ collaborative training sessions, leveraging blockchain and IPFS for data security. Created tools to manage and configure distributed training, handling contributors and datasets.

LEADERSHIP

Tech-Club Jyothy IT, Core team — Jun 2021 – May 2024
• **Facilitated** National Level Hackathons, JITHACK, accommodating 500+ participants, demonstrating leadership and planning.

HACKATHONS

JITHACK, Team Leader
• **Secured 3rd place** in JITHACK, **collaborated** with team members to **develop** an Automated Crowd Management System, **addressing** challenges in managing public crowding with high accuracy and cost-effectiveness.

Project Competition GSSS College
• **Facilitated** and **won** for building and showcasing a Women-Safety app with 3+ features like electronic device sensors and emergency alert systems, **demonstrating** effectiveness in enhancing personal safety.