

Ramkumar M V

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Profile

B.Tech graduate from SRM Institute of Science and Technology with an impressive CGPA of 9.58/10, awarded a Performance-Based Scholarship for academic excellence. Passionate about research, with international internship experience across two countries. Expertise in data analysis, machine learning, IoT, and computer vision, with a proven track record of developing innovative, real-world solutions. Contributed to research projects at MITACS in Canada and as a Global Academic Intern at NUS in Singapore.

Skills

SQL, Python, Git, Tensorflow, Pytorch, Hadoop, Snowflake, Pyspark, OpenCV, FASTapi, Flask, Docker, AWS (S3, EMR, Redshift, RDS, Lamda, Glue), Predictive analysis, Excel, Tableau, Scikit-Learn, Feature Engineering, Raspberry Pi

Education

B.Tech E.C.E - (9.58/10) *SRM Institute of Science and Technology* **Chengalpattu, India** 2020-2024

Relevant Courses: Applied Machine Learning, Pattern Recognition and Neural Networks, Data Analysis using Open Source Tools, Machine Perception with Cognition, Advanced calculus and complex analysis, Probability and stochastic processes.

Professional Experience

AI/ML Associate (*IIT Madras*) **Chennai, India** June 2024 - Present

- Developing a home automation system for houses and a security system for Indian Oil Corporation Ltd. Implementing solutions to enhance operational efficiency and security measures.

Machine Learning Intern (*MITACS Globalink Research*) **Toronto, Canada** Jun 2023 - Sept 2023

- Worked with **Austin Page** and **Prof Akramul Azim** to create **EcoPal**, to cut carbon emissions via IoT and Machine Learning. It encompasses two core functions: utilizing ML to suggest activity adjustments and enabling direct control of household devices through the app.

Global Academic Intern (*National University of Singapore*) **Kent Ridge, Singapore** Dec 2022 - Apr 2023

- Led the development of a custom VGG model for retail product prediction, integrating hand gesture detection for enhanced user interaction. Proficient in data collection, preprocessing, CNN implementation, and deployment on AzureML.

Computer Vision Intern (*Airdonex Technologies Pvt Ltd*) **Chennai, India** Nov 2022 - Mar 2023

- Developed an automated drone landing system employing computer vision with ArUco marker detection. Leveraged MAVROS, Ardupilot, and MAVLink to validate functions, contributing to a 80% enhancement in drone system capabilities through OpenCV.

Publications

- Adaptive LSTM Forecasting for RO Membrane Fault Detection (Accepted) - IEEE Xplore
- Crop Care AI: The smart farming revolution (Submitted) - ICCIS 2024
- A Hybrid Approach to License Plate Recognition: YOLO-v9 and Quantum-Enhanced CNN Model (Submitted) - IEEE Xplore
- Dynamic Course Optimization Using Machine Learning in Learning Management Systems (In progress)

Projects

A Novel Deepfake Classifier Paradigm Based On Custom Deep CNN's Jan 2023 - April 2023

- Developed a 30-layer custom CNN for deepfake detection, using deep learning to identify subtle visual cues. Applied regularization techniques to enhance accuracy and prevent overfitting, effectively distinguishing real from fake content.

Plant disease prediction using Raspberry Pi Mar 2022 - May 2022

- Built a Raspberry Pi module utilizing CNN for 94% accurate plant disease prediction and real-time user notifications to the user interface. Added the need for doctors assistance tab.

Design and development of user-adaptive bubble tube Nov 2021 - Jan 2022

- Created a multi-mode bubble tube for autistic children, using ML and IoT to adjust therapy settings based on analyzed actions. Providing customized support for autistic children.