Sanjith M

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Education

Amrita Vishwa Vidyapeetham, *BTech CSE*   2023 – Present | Coimbatore, India

DAV Boys Senior Secondary School, *Senior Secondary*   2022 – 2023 | Chennai, India

Relevant Coursework

- Data Structures
- Database Management
- Algorithms Analysis
- Computer Architecture

Professional Experience

Team Torpedo   Apr 2025 – Present | Coimbatore, India

Led a specialized team in developing an **autonomous all-terrain vehicle** for a national-level competition (**2027 aBAJA SAEINDIA**), focusing on real-time pathfinding algorithms for unstructured, dynamic environments.

Projects

Machine Learning Neural Network, *Handwriting Recognition* 🔗

Developed a **PyTorch CNN** with **ReLU** activations and **Adam** optimizer to classify **369 classes** of handwritten mathematical symbols, achieving **94% accuracy**. Applied learning rate scheduling to mitigate overfitting.

Personalized Financial Advisory Website, *MomenTerm* 🔗

- Developed a **Next.js** web app using **Yahoo Finance API** to deliver personalized, real-time investment insights.
- Trained **ML models** to analyze user preference and provide **customized recommendations**.

Publications

Surgical Instruments Recognition (In Preparation)

Co-authored a research project on surgical instrument detection using a **YOLOv12**-based deep learning model using a custom-labeled dataset of over 7,000 images across 23 surgical tool classes and trained to achieve **83% mAP**.

Achievements

PyTorch Hackathon Runner-Up, *IETE Amrita*

Developed a **PyTorch**-based classifier for handwritten mathematical symbols and secured the **runner-up** position for my team in an intra-college hackathon with over **250 participants**.

Coding Achievements

LeetCode 🔗 : Solved **250+ problems** across algorithms and data structures. Ranked in the **top 5% globally**.

Skills

Programming Languages
C/C++, Python, Rust, Haskell, Java, GoLang

AI/ML
PyTorch, Numpy, Pandas, Jupyter Notebook

App Dev
Flutter, Dart, React Native, Android Studio

Dev Tools
Linux, Git, AWS, Azure, Docker