

Manglesh Patidar

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🐙 github.com/manglesh001 |

🔗 leetcode.com/Manglesh |

🌐 Portfolio

Education

Indian Institute of Technology (IIT) Madras

MTech in Computer Science and Engineering

LNCTE Bhopal

BTech in Computer Science and Engineering

SpringWood School Neemuch

XII CBSE

SpringWood School Neemuch

X CBSE

Jul 2024 - Present

CGPA: 8.48/10

Jul 2017 - Jun 2021

CGPA: 8.73/10

Jul 2016 - Jun 2017

Percentage: 84/100

July 2013 - Jun 2014

CGPA: 9.2/10

RELEVANT COURSEWORK: Data Structure and Algorithm, Database Management System, Operating System, Deep Learning, Machine Learning, Natural Language Processing, Computer Network.

Work Experience

Embitel Technology, Bangalore

Jul 2021 - Jul 2023

Associate Software Engineer

- Designed **Android Automotive UI/UX** in **Figma**, leveraging **MVVM architecture** to improve streamline navigation and **reduce user interaction time by 15%**.
- Developed and integrated Android Automotive features in **Java** on **AOSP**, implementing **Bluetooth PBAP** to sync **100%** of recent calls, contacts, and favorites with enriched metadata.
- Configured **AOSP** emulators and validated **Bluetooth** phone features, integrating **Weather API** for real-time driver information.
- Java, Android Studio, Figma, REST APIs, XML, Git.

TVS MOTOR, Bangalore 🌐:

May 2025 - Jul 2025

R & D Intern-Cluster and Infotainment

- Researched and implemented** a fully functional, modern **e-bike infotainment dashboard UI** using **LVGL**, replacing costly commercial HMI tools like **Qt**, **Kanzi**, **CGI Studio**, **EB Guide**, etc.
- Designed and implemented** an interactive **HMI** using **LVGL UI Editor** with **C/C++** in **Microsoft Visual Studio 2022**.
- Achieved Rs.10 lakh/year cost savings** by delivering a production-ready **open-source, embedded HMI solution** without licensing fees or source code disclosure constraints.

Skills

Languages: C++, Python, Java, C, SQL, MySQL, HTML, CSS, MongoDB, OOP.

Technologies & Tools: PyTorch, NumPy, Pandas, Matplotlib, LVGL, Linux, Figma, RESTful APIs, Git, GitHub.

Project Work

- Mini-Torr:Peer-to-Peer File Sharing System(C++)** 🌐: Designed and developed a **decentralized file-sharing** platform inspired by **BitTorrent**, enabling users to share, download, and manage files within group-based networks.
- Implemented **socket programming** for client-tracker communication, **multithreading** for parallel downloads, and **SHA1 hashing** for verifying chunk integrity.
- Devised a **piece selection algorithm** to boost download speed by fetching chunks in parallel from multiple peers.
- Image Classification Using CNN and Pretrained Model (Python,Pytorch)** 🌐: Built and trained a **CNN image classifier from scratch** using **PyTorch** with configurable layers and hyperparameters on the **iNaturalist dataset**.
- Implemented hyperparameter tuning, validation splitting, and filter visualizations to achieve **44.9% test accuracy**.
- Fine-tuned a ResNet50** model pre-trained on **ImageNet**, achieving **88.05% test accuracy** via selective layer freezing and transfer learning techniques.
- Feedforward Neural Network (Python,Pytorch)** 🌐: Developed a customizable feedforward neural network from scratch using **Pytorch** to classify **Fashion-MNIST** images into **10 categories**.
- Implemented **manual backpropagation** with optimizers without using auto-differentiation libraries.
- Performed hyperparameter tuning with **WandB Sweeps** and validation split, resulting in **87.1% test accuracy**.

Scholastic achievement

- Achieved **99.28 percentile** in **GATE CSE 2024** and **92.21 percentile** in **GATE DA 2024**.
- Shortlisted for the role of **Scientific Officer** at **ISRO 2024** and **BARC 2023** through national-level selection.
- Qualified **IIITH PGEE 2023** exam and completed one year of the **M.Tech CSE program** with a **CGPA of 7.53 (2023–24)**.
- Served as a **Teaching Assistant** for **Introduction to Programming Languages** and **OOPs Lab** at **IIT Madras**.
- Appointed as a **Placement Coordinator** in the **Placement and Internship Team** at **IIT Madras**.