# Ansh Vivek Malhotra

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 Im Ansh Vivek Malhotra
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# Education

# National Institute Of Technology Karnataka

Mangalore, Karnataka

Bachelor of Technology in Computer Science and Engineering

Nov '22 - Mar '26

#### Technical Skills

**Programming and Languages:** C++, C, Python, Data Structures, Algorithms, Dart, MySQL.

Frameworks and Libraries: Flask, Flutter, Postman, React, OpenCV.

Tools: Git/GitHub, Firebase, Colab, Cisco Packet Tracer, GNS3, Logisim, JFLAP, Wireshark, LaTeX (Overleaf), Grafana. Coursework: Data Structures and Algo, Software Engineering, Computer Networks, Design of Digital Systems, Operating Systems, Information Security, Probability Theory, Computer Architecture, Cloud Computing, Compiler Design.

## Experience

# **Ergon Mobility**

Bangalore, Karnataka

Software Developer Intern — Tech Stack - Python, React, Firebase, MySQL, Grafana

May '25 - July '25

- Developed a web application to interface with CAN-based vehicle systems for real-time data monitoring.
- Migrated the database from a legacy service to a new platform, improving performance and maintainability.

## Industrial Training - NIT Karnataka

Mangalore, Karnataka

Internship — Tech Stack - Python

Dec '24 - Jan '25

- Implemented the DECO algorithm to optimize task offloading in Mobile Edge Computing (MEC) systems.
- Handled homogeneous and heterogeneous scenarios for scalable scheduling across diverse edge servers.

### Council of Scientific and Industrial Research-4PI(NAL)

Bangalore, Karnataka

Research Intern — Tech Stack - TensorFlow Federated, Python, OpenCV

May '24 - July '24

- Implemented federated learning models in a server-client setup, focusing on data privacy and communication efficiency.
- Applied advanced techniques like FederatedTrust to enhance security in federated learning systems.

#### **KMC** Hospital

Mangalore, Karnataka

App Team Lead — Tech Stack - Flutter, Dart

Mar '24 - July '24

- Collaborated with medical professionals to gather and analyze patient data for trend identification and reporting.
- Assisted in the development of a system for monitoring and managing patient health metrics efficiently.

## **Projects**

#### **Telephone Directory App** | Flutter, Dart, MySQL Database

GitHub

- Implemented a user-friendly interface for National Institute of Technology Karnataka as official Telephone directory app.
- Integrated MySQL database for efficient data management and retrieval across both Android and iOS platforms.

# Database Systems Course Registration Portal | Frontend: HTML, CSS; Backend: MySQL

 $\mathbf{GitHub}$ 

- Developed user-centric course registration interfaces with secure, role-based admin access.
- Optimized database operations to enhance data retrieval speed and overall system performance.

#### HCR (Handwritten Character Recognition) | TensorFlow, OpenCV, Python, CNN

 $\mathbf{Git}\mathbf{Hub}$ 

• Pioneered the HCR project utilizing AI/ML with TensorFlow, CNN datasets, and OpenCV, achieving high accuracy in real-time handwritten character recognition.

## Multi-UAV-Enabled Load-Balance Mobile-Edge Computing for IoT Networks | Python

GitHub

- Optimized task scheduling and resource allocation in IoT networks using UAVs for load balancing and reduced latency in mobile-edge computing.
- Applied mathematical models for decision making, scheduling, DE-Based Multi-UAV Deployment.

# Leadership / Extracurricular

- President, Indian Society for Technical Education Mentored 200+ students; prior role: Tech Secretary
- Vice President of Web Design and Public Relations at Student Energy NITK Chapter.
- Represented the CSE Department NITK at the CREST NITK Conference.
- Executive member of LSD NITK (Literary, Stage and Debating Society).