# Ayush Gupta

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## Education

**Electronics and Telecommunication Engineering** July 2026
*Sardar Patel Institute Of Technology* *Mumbai, India*

## Experience

**Software Development Intern** Jan. 2026 – Jun. 2026
*DigiPlus IT* *Mumbai, India*

Enhanced a production-grade **Enterprise Resource & Campaign Management System** using **React, Node.js, Express, and MongoDB**, developing REST APIs, automating invoice and proposal workflows, optimizing dashboards, and integrating **AWS S3** for document storage.

## Projects

**Quadcopter: Automatic License Plate Recognition | Python, YOLOv8, OpenCV** Nov. 2025

- Built a real-time UAV-based **license plate recognition system** using **YOLOv8 (Ultralytics)**, **EasyOCR**, **OpenCV**, and **SORT**, performing inference on **analog video transmission**.
- Improved detection accuracy from **0.86 to 0.92 mAP@0.5** via a **cloud–ground retraining pipeline** (Google Colab, Tesla T4) and optimized latency to **169–209 ms** under noisy, real-world conditions.

**Jasdaq: Low Latency Stock Trading Engine | Java, Spring Boot, MySQL** Aug. 2025

- Built a full-stack HFT system using Spring Boot, Django, React, and MySQL with a real-time price-time priority matching engine, WebSocket live order book updates, and UDP multicast for low-latency market data broadcast.
- Designed an admin-controlled share-pool mechanism via Django Admin that auto-injects IPO SELL orders into the matching engine; trade results are dual-broadcast over UDP multicast and WebSocket STOMP for browser clients.

**EduMerge: Content Aggregator | Django, React, MongoDB, MySQL** June 2025

- Developed a full-stack aggregator with **JWT/OAuth-based RBAC (3 roles)** using **Django**, **React**, and **Tailwind**, supporting secure user workflows.
- Ingested **1000+ courses** via **Selenium** pipelines (MIT OCW, YouTube API) with **90%+ accuracy** in under **2 minutes**, and enabled media delivery using **AWS S3** and **Cloudflare Stream**.

## Publications

**Real-Time UAV-Based License Plate Recognition via Analog Video Transmission and Closed-Loop Cloud–Ground Incremental Learning** *IEEE CONIT 2026*

Published a study on on a cloud–ground collaborative LPR system using UAV-based analog video transmission, YOLOv8, and EasyOCR. Reduced full-plate failure rate from **18.7% to 9.6%** while maintaining **169-209 ms** end-to-end latency.

## Skills

**Languages:** Python, Java, SQL

**Libraries & Frameworks:** Django, Flask, React

## Certifications

**Finance:** Introduction to Corporate Finance (Great Learning Academy)

**Analytics:** Business Analytics (Techfest, IIT Bombay)

## Position Of Responsibility

**Training and Placement Coordinator** | *S.P.I.T* June 2024

- Managed end-to-end campus recruitment operations, coordinating with firms such as **Barclays** and **WorkIndia**, maintaining placement databases, and acting as the primary interface between recruiters, faculty, and students.