

# ATHARVA GANESH PAWAR

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## EDUCATION

| Degree / Education                    | Institute                                   | CGPA / % | Year           |
|---------------------------------------|---------------------------------------------|----------|----------------|
| M.Tech (Dept. of Management Sciences) | Indian Institute of Technology, Kanpur      | -        | 2026 - Present |
| B.Tech (Computer Engineering)         | Pune Institute of Computer Technology, Pune | 8.54     | 2020 - 2024    |
| Higher Secondary Education            | Ashok Vidyalaya, Pune                       | 80.77%   | 2020           |
| Secondary Education                   | Dnyanganga English Medium School, Pune      | 92.80%   | 2018           |

## WORK EXPERIENCE

### Project Intern, High Energy Material Research Laboratory, DRDO

Aug 2023 - Dec 2023

- Developed a real-time **Vehicle Number Plate Detection System** using **YOLOv8** for vehicle detection, a dedicated YOLO plate detector, and **EasyOCR** for text recognition.
- Implemented the **SORT** tracking algorithm for multi-object tracking, enabling consistent vehicle identification across video frames.
- Built a **React.js** interface backed by **PHP, MySQL, and XAMPP**, supporting authentication, dashboard visualization, historical records, and date-based filtering.
- Achieved **89% license plate recognition accuracy** while maintaining reliable performance in real-time surveillance scenarios.

## PROJECTS

### FastAPI-Integrated Student Mental Health Analytics System | Machine Learning | Regression | Self Project

[Deployment Link](#) | [GitHub](#)

- Developed an end-to-end **Machine Learning regression system** to predict student mental health scores from demographic, academic, lifestyle, and social media data.
- Performed EDA to identify missing values, outliers, and feature correlations; prevented **data leakage** via train-test split before preprocessing.
- Built a **Random Forest** regression model with **Scikit-learn**, serialized using **Joblib** for efficient inference.
- Designed a **FastAPI REST API** with Pydantic schema validation, and an HTML/CSS/JavaScript frontend for real-time predictions.
- Achieved **87.70% R<sup>2</sup> Score, 0.349 MAE, 0.465 RMSE** with a low-latency end-to-end inference pipeline.

### Vendor Invoice Intelligence System | Regression | Binary Classification | Scikit-learn, SQLite, Streamlit | Self Project

[GitHub](#)

- Built a **regression model** to predict vendor freight costs and a **binary classification model** to flag high-risk invoices, supporting procurement planning and risk detection.
- Performed SQL-based data aggregation, invoice-level feature engineering, and business rule-based risk labeling.
- Optimized pipelines using **GridSearchCV** and **StandardScaler**; deployed via **Streamlit** for real-time inference.
- Achieved **96.99% R<sup>2</sup> (MAE 24.11, RMSE 124.72)** for freight prediction, and **89% accuracy, 96% precision, 82% F1-score** for invoice risk classification.

## COURSEWORK & SKILLS

**Relevant Coursework:** Data Mining and Knowledge Discovery, Probability & Statistics, Operations Research for Management, Introduction to Computing (in progress)

**Skills:** C, C++, Python, SQL, React, NumPy, Pandas, Matplotlib, Scikit-learn

**Soft Skills:** Analytical Ability, Decision Making, Problem Solving, Communication