

# SONAL ULHAS SHINDE

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## Summary

Aspiring data scientist currently pursuing a BE in Artificial Intelligence and Data Science with strong skills in Python, machine learning, and data analytics. Known for developing real-world solutions through teamwork and personal projects. Recognized for academic excellence and contribution to industry-based internship projects.

## Experience

### Tata Motors Passenger Vehicle Limited

Data Science Intern

Pune

01/2025 - 06/2025

- Tata Motors Passenger Vehicle Limited is a leading Indian automotive manufacturer, known for producing innovative, reliable, and fuel-efficient cars. It focuses on delivering advanced mobility solutions with a strong emphasis on safety, design, and sustainability.
- Collaborated with Data Science and Chassis teams to build solutions using vehicle sensor data. Contributed to motion sickness detection logic and led an independent tool tracking system using QR codes. Worked with Git, Excel, and version control tools in an agile environment.

## Education

### Ajeenkya D.Y. Patil School of Engineering, Lohegaon

11/2022 - Present

BE (Artificial Intelligence and Data Science)

### Mahatma Gandhi Junior College, Rajgurunagar

06/2021 - 03/2022

HSC

## Skills

**Programming:** Python

**Data Science & ML:** Pandas, NumPy, Scikit-learn, Matplotlib

**Tools & Platforms:** Jupyter Notebook, Spyder, VS Code, Git, GitHub, Anaconda

**Databases:** MySQL

**OS:** Windows, Ubuntu, Raspberry Pi

**Soft Skills:** Teamwork, Communication, Problem-Solving, Time Management

**UI-UX & Design Tools:** Figma, InVision

**Web Technologies:** HTML, CSS, JavaScript

## Projects

### 1. Pneumonia Detection using Convolutional Neural Networks (CNN)

- Developed a deep learning model using CNN architecture to detect pneumonia from chest X-ray images, aiming to support early diagnosis and reduce manual radiology workload.
- Achieved over 90% accuracy on test datasets using data augmentation and optimized architecture.
- Successfully demonstrated at Project Exhibition 2024 and presented at ICRTAIDS 2024 Conference.

### 2. Motion Sickness Detection System

- Designed and implemented a real-time system that uses CAN Bus data to monitor driving patterns contributing to passenger motion sickness.
- Developed a **Python-based algorithm** to classify driving behaviors like braking, acceleration, and cornering. Integrated a feedback mechanism using rolling-window logic for real-time analysis.

### 3. QR-Based Device Issue and Return Management System

- Developed a web-based device inventory system using Python and QR codes to streamline device issue and return tracking.
- Designed Google Apps Scripts to auto-update return dates in linked Google Sheets, eliminating manual updates. Enabled device identification through QR scans, improving efficiency and reducing data entry errors.

#### **4. E-Learning Mobile App – Wireframing**

- Designed low-fidelity and high-fidelity wireframes focused on user flow, accessibility, and usability.
- Applied UX principles such as information architecture and user-centric design.

#### **5. Recipe Finder App – UI Prototype (Figma)**

- Designed an interactive UI prototype using Figma.
- Created visually appealing screens for recipe search, filters, and detailed views.
- Focused on clean layout, consistent design system, and intuitive interactions.

### **Certification**

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- Python for Data Science – NPTEL
- Data Science – HP LIFE
- Power BI – Vodafone Idea (VOIS)
- Introduction to Figma – Simplilearn
- Introduction to InVision – Simplilearn

### **Key Achievements**

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- Academic Excellence Award – AY 2023–24
- 2nd Place in PBL Project Exhibition 2024
- Awarded Top 1% with Gold Medal in NPTEL Python for Data Science