

# AMRITANSHU SHIWANSHI

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## EDUCATION

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### B.Tech CSE

*SRMIST Kattankulathur*

2022 – Present

Chennai

### Senior Secondary School

*Jawahar Navodaya Vidyalaya*

82.2%

2020 – 2021

Mandi

## SKILLS

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### Analytical Tools:

Power BI, Quadratic, MS Office, n8n Automation

### Programming Languages:

Python, SQL, Java, JavaScript (React.js, Node.js)

### Machine Learning & Deep Learning:

YOLOv5, OpenCV, Model Optimization, Feature Engineering

### Databases:

PostgreSQL (Supabase), MongoDB

### Technical Competencies:

Data Structures & Algorithms, API Development, Workflow Automation, Real-time Video Processing, Face Recognition & Liveness Detection

## PROJECTS AND PUBLICATIONS

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### Detection of Depression Using Sentiment Analysis from Social Media Comments [Python | TF-IDF | RoBERTa]

*IEEE - (AIC 2025)*

- Built a sentiment analysis model achieving 89.57% accuracy and 0.90 F1-score on Reddit comments using TF-IDF with RoBERTa and SVR.
- Improved minority class detection via RandomOverSampler, reaching 0.90 precision and 0.90 recall across sentiment categories.

### Browser-Based Live Face Authentication System with Spoof Detection [React js, Node js, Mongo DB]

- Developed a browser-based face authentication system using React.js and Node.js with in-browser face recognition and liveness detection to ensure secure, low-latency authentication.
- Implemented spoof detection through randomized liveness checks (e.g., blink, head-turn, gaze tracking) to block photo, video, and mask-based attacks.

### Supply Chain Analytics – AI-Driven Analysis [n8n | Quadratic | PostgreSQL (Supabase)]

- Built an automated workflow using n8n to ingest order and inventory data directly from email into a Supabase-hosted PostgreSQL database, enabling real-time visibility across the supply chain.
- Performed AI-powered analysis in Quadratic by connecting to PostgreSQL, calculating key supply-chain KPIs (OT %, IF %, OTIF %, Line Fill Rate, Volume Fill Rate), and generating insights on customer performance and city-wise delivery trends.
- Created KPI sheets and automated insights that helped identify top customers by order value, delivery performance patterns, and potential bottlenecks, improving analytics accuracy and reducing manual effort significantly.

### Pothole Detection using YOLOv5 [OpenCV | Model Optimization]

- Engineered a real-time pothole detection system achieving 89.25% accuracy and 23.99 FPS, leveraging YOLOv5 with a custom-annotated road dataset (50+ hours of video footage).
- Designed and optimized OpenCV-based image/video processing pipelines, enabling robust detection in varied lighting and weather conditions with 90.37% precision.

## **CERTIFICATES**

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**Oracle Data Platform 2025 Foundations Associate**

Oracle University

**Google Analytics**

Google

**Machine Learning Foundation**

AWS ACADEMY

**Data Analytics Essentials**

Cisco

**Introduction to Data Science**

Cisco