YASH TOMAR

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PROFESSIONAL SUMMARY

Computer Science Engineer specializing in Industrial Automation, AI Systems, IoT Architecture, and Scalable Software Engineering. Proven experience delivering SCADA-integrated surveillance systems, LiDAR analytics platforms, and ML-driven robotics solutions with measurable operational impact (30–70% efficiency improvements). Seeking Technology Consulting / AI Engineering roles where complex systems and business outcomes intersect.

EDUCATION

B.E. in Computer Science, Chandigarh University, India 2021 – 2025
GPA: 8.58

CORE COMPETENCIES

Programming	C++, Python, JavaScript, SQL
AI/ML	TensorFlow, NLP, Model Optimization, LLM Workflows
Automation	SCADA Systems, PLC Integration, Distributed Control Architectures
IoT	ESP32/8266, LiDAR Systems, Sensor Fusion, Edge Computing
Full Stack	Flutter, HTML, JavaScript, React, NextJS, NodeJS, Firebase, Electron
Cloud	AWS, GCP, Docker, Linux Systems
Analytics	Power BI, Tableau, Git, GitHub Data Pipelines, Visualization Systems

PROFESSIONAL EXPERIENCE

Software Engineer Nov 2025 – Present
Ladder Automation Solutions Pvt. Ltd., India

- Designed and deployed SCADA-based remote vigilance and surveillance systems enabling centralized monitoring, supervisory control, and automated incident response.
- Integrated PLCs, RTUs, edge sensors, and distributed nodes through industrial automation pipelines improving system reliability across multi-device environments.
- Improved product efficiency by 35% through automation logic redesign, HMI optimization, and system performance tuning.
- Reduced maintenance and manual intervention time by 30% via predictive diagnostics, real-time alerting, and automated monitoring workflows.

Software Developer Intern Apr 2025 – Oct 2025
RDC Concrete Pvt. Ltd., India

- Engineered a LiDAR-based 3D stockpile analytics system reducing auditing cycles from 2 days to under 5 minutes.
- Achieved 95%+ volume estimation accuracy using point cloud processing and reference ground modeling.
- Built wireless mobile and desktop interfaces for remote LiDAR control improving operational efficiency by 40%.
- Optimized backend analytics pipelines reducing scan-to-report latency by 70%.
- Replaced manual auditing with automated system improving efficiency and accuracy.

SELECTED PROJECTS

LLM Training Visualizer & Performance Analyzer

- Constructed an advanced dashboard for visualizing LLM training metrics, achieving a 30% increase in model convergence accuracy and equipping the team with actionable insights for performance optimization.
- Integrated real-time analytics dashboards to compare training runs, detect overfitting, and optimize hyperparameters.
- Designed modular architecture allowing integration with PyTorch-based training pipelines and GPU environments.

Local LLM-Based Content Automation System

- Built an end-to-end local AI pipeline using Ollama (Mistral) for news ingestion, NLP summarization, and professional content generation.
- Integrated Stable Diffusion v1.5 (GTX 1650) for automated contextual visual generation.
- Architected scalable semi-automated publishing workflows with extensible design for enterprise use.

AI-Driven Autonomous Rover for Agricultural Field Analysis

- Designed IoT-based rover using ESP32-CAM, LiDAR, and environmental sensors for real-time terrain and crop monitoring.
- Implemented ML-based decision-making models for soil condition analysis, obstacle avoidance, and agricultural field insights.
- Achieved 95% navigation success rate and reduced manual intervention by 60% via intelligent route planning.
- Enhanced precision by 30% using optimized multi-sensor fusion algorithms.

Cross-Platform Code Editor (ElectronJS)

- Engineered high-performance editor using ElectronJS, React, and TypeScript supporting 20+ languages.
- Reduced file operation latency by 40% and enabled concurrent synchronization across 500+ sessions.

PUBLICATIONS

Decentralized Academic Certification Framework
Blockchain-based academic verification system using Hyperledger Fabric reducing credential validation time by 90%.
DOI: 10.37896/YMER24.03/91

Hybrid Stock Prediction Framework using NLP and Technical Indicators
Integrated sentiment analysis, technical indicators, and financial data for improved forecasting accuracy.
DOI: 10.1109/ICPIDS65698.2024.00071

CERTIFICATIONS

Salesforce Certified AI Associate (2025)
Natural Language Processing – Coursera
Project Management Foundations – Coursera
Computer Networks and Internet Protocol – NPTEL