

# M. Shashank

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Chennai, Tamil Nadu, India | [shashank.gtrv@gmail.com](mailto:shashank.gtrv@gmail.com) | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

## PROFESSIONAL SUMMARY

Machine Learning-focused Software Engineer with hands-on experience designing, evaluating, deploying, and monitoring end-to-end ML systems for real-world applications across agriculture, finance, sustainability, and human-centric systems. Published researcher with peer-reviewed work in applied machine learning, strong Python-based ML pipelines, backend API development, and production-ready deployment with monitoring and versioning practices.

## CORE SKILLS

### MACHINE LEARNING & DATA

- Python, Pandas, NumPy, Scikit-learn, LightGBM, XGBoost, Random Forests, Artificial Neural Networks, Feature Engineering, Model Evaluation, ML Pipelines, Inference Optimization, SHAP Explainability

### BACKEND & DEPLOYMENT

- Flask, REST APIs, SQL, MySQL, ONNX, Model Serving, API-based Inference, AWS (Basics), Vercel Deployment

### ENGINEERING & PRODUCT FOUNDATIONS

- Data Structures & Algorithms, Object-Oriented Programming, Backend System Design, Git, Linux
- Analytical Thinking, Product Development, Structured Problem Solving, Project Planning

## PROFESSIONAL EXPERIENCE

### Product Engineer Intern – Graas

Jan 2025 – Feb 2025

- Contributed to Python-based backend services supporting data-driven application features, focusing on performance, reliability, and clean API design.
- Worked with structured datasets and backend pipelines, ensuring data readiness for analytics and ML integrations.
- Collaborated in an agile environment to rapidly prototype and stabilize production-grade features.

### Product & Innovation Intern – ECLearnix EdTech Pvt. Ltd.

Dec 2025 – Jan 2026

- Contributed to product-driven initiatives within the Innovation domain, collaborating with cross-functional teams to analyse requirements and design scalable solutions.
- Applied structured problem-solving to real business challenges in a remote-first environment.
- Gained hands-on exposure to workflow processes, project planning, and strategic decision-making while working closely with mentors and reporting to managers.

## MACHINE LEARNING PROJECTS & RESEARCH

### AGRIHUB – ML Platform for Cooperative Farming

(Published Research | Deployed System | Award-Winning Project)

- Built an end-to-end ML system combining weather, rainfall, soil chemistry, crop, and regional data (~13K records, 135 engineered features).
- Trained and evaluated Random Forest and XGBoost classifiers for multi-class crop suitability prediction.
- Achieved 94.6% accuracy and 0.95 macro-F1 using XGBoost with balanced performance across suitability classes.
- Integrated SHAP-based explainability to identify key agronomic and climatic drivers influencing predictions.
- Deployed AgriHub v1 with a live web interface and backend inference pipeline.
- Implemented basic monitoring and logging via a public web interface to track inference usage and system behavior.
- **1st Place Winner – SVCE Innovates 2024**

### **Automated Credit Scoring System for Direct Digital Lending**

- Developed a credit risk prediction system using LightGBM, focusing on model performance and explainability.
- Optimized inference by converting trained models to ONNX, improving deployment efficiency.
- Analyzed feature importance to support transparent and data-driven decision-making.

### **EcoTrack – Smart Waste Collection Navigator**

**(Published Research | Conference Paper | Award-Winning Project )**

- Built predictive analytics models using historical and real-time data to optimize municipal waste collection routes.
- Applied data-driven decision logic to improve operational efficiency and sustainability outcomes.
- **Best Paper Presentation – ICMCTT-IV 2024**

### **E-R Homie – Empathetic AI Home Automation System**

**(Published Research | Conference Paper)**

- Conceptualized an AI-powered home automation system adapting to user emotional states using multi-modal sensory inputs.
- Explored ML-based emotion inference from voice, facial expressions, and physiological signals.
- Focused on human-centric ML design and adaptive system behavior.

## **LEADERSHIP & COMMUNITY ENGAGEMENT**

- **Technical Head – Developer Student Community, SVCE**
  - Led the technical direction of the community by planning and executing hands-on workshops, technical sessions, and developer-focused initiatives.
  - Mentored peers, guided technical teams, and supported event execution to promote real-world problem-solving.
  - Designed learning experiences that strengthened practical engineering skills and fostered a collaborative developer culture.
- **Google Student Ambassador – SVCE**
  - Selected as the only student from the college to represent SVCE as a Google Student Ambassador.
  - Recognized by the Department of CSE for contributions to community learning and technology outreach.
  - Engaged in initiatives promoting learning in AI and cloud technologies.

## **KEY ACHIEVEMENTS & RECOGNITION**

- Top 50 Finalist (Rank 14 / 300+ teams) – IIT Madras Hackathon 2024
- 1st Place – SVCE Innovates 2024 (Agrihub)
- Best Paper Presentation – ICMCTT-IV 2024 (EcoTrack)
- Selected through initial and intermediate evaluation rounds of Smart India Hackathon (SIH) 2025
- Co-authored Book Chapter: *Machine Learning and Data Analytics Framework for Sustainable Environment*  
Published in *Applied Machine Learning for IoT and Data Analytics*

## **EDUCATION**

Bachelor of Engineering – Sri Venkateswara College of Engineering  
CGPA: 8.5 / 10

Sep 2023 – Present

## **CERTIFICATIONS**

- Google AI Essentials – Coursera
- Data Science and Machine Learning – NIELIT
- Introduction to Generative AI and LLMs – Google Developers
- Python (Basic), SQL (Basic & Intermediate) – HackerRank