

## **SUMMARY**

Automation & AI Engineer | Python Developer | Machine Learning Specialist

Results-driven engineer with 4+ years of experience in automation, Python development, and end-to-end deployment of machine learning models. Expert in computer vision, data science, and process automation for real-time, high-impact solutions. Proven track record of reducing manual effort by 70–95% and optimizing workflows using EDI, cloud platforms (AWS, GCP), and advanced ML frameworks. Certified in Machine Learning (Stanford), Deep Learning, and Data Science.

## **WORK EXPERIENCES**

**Automation and AI Engineer, Crystals** (Columbus, GA and St. Louis, MO)

**Mar 2024 – Present**

- Automated EDI workflows, reducing manual processing time by 70% and ensuring secure, real-time electronic delivery of transactional documents.
- Designed and deployed autonomous loadout solutions, cutting project costs by 55% and manual effort by 95% through in-house technical innovation.
- Implemented truck weighing software, reducing manual steps by 20% and minimizing human error, while automating ticket information flow through custom email automation scripts, resulting in significant productivity gains.
- Integrated Siemens historian and HPLC data into live dashboards, empowering data-driven decision-making and boosting production capacity.
- Led IT infrastructure modernization, implementing Palo Alto Networks for secure remote access and integrating AI-powered productivity tools across Google Workspace and Microsoft 365.
- Developed and launched multi-level purchase requisition and financial tracking system, improving supply chain efficiency and spend visibility.
- Created 5+ dashboards for real-time monitoring, improving data accessibility, and decision-making speed.

**Data Analyst, Realsoft** (Remote – Part-time Contract)

**Jan 2024 – Mar 2024**

- Analyzed large-scale EHR datasets using SAS, applying advanced statistical models to improve patient outcome predictions by 15%.
- Built interactive PowerBI dashboards for healthcare KPIs, reducing patient wait times by 20% and optimizing resource allocation.

**Graduate Research Assistant, CSU** (Columbus, GA – Hybrid)

**Sep 2022 – Dec 2023**

- Developed a real-time video surveillance system with object detection and tracking, reducing manual monitoring by 80% and enabling automated alerts.
- Built automated data annotation pipelines for imagery datasets, streamlining data preparation and cleaning.
- Trained and optimized computer vision models on NVIDIA Jetson, achieving 0.84 mAP and 15% improved GPU efficiency using CUDA.
- Managed model deployment in production, optimizing GPU computing efficiency by 15% through CUDA and implementing deep learning techniques for low power usage.
- Engineered Python APIs for real-time data transfer to Oracle databases, enhancing system integration and response time.

**Application Development Associate, Accenture** (Maharashtra, India – Remote)

**Nov 2020 – Jun 2022**

- Automated data pipelines using Hadoop, AWS Athena, Docker, and Jenkins, enabling efficient CI/CD for financial analytics.
- Managed AWS-based data lakes, performing advanced analytics with APIs and Airflow ETL tools.
- Developed a custom code validation tool for Accenture, aligning with client requirements and delivering a production-ready executable to improve code quality.
- Trained NLP models to extract requirements from compliance documents, improving project prioritization and decision-making.
- Collaborated on financial data research, developing a comprehensive data visualization dashboard for reporting.
- Developed RPA solutions for web/database testing, accelerating QA cycles and saving 100+ hours of manual effort weekly.

## **SKILLS**

### **Core Competencies**

- Machine Learning, Python Programming, Computer Vision, Data Science, Automation Engineering, Cloud Computing (AWS, GCP), DevOps (Docker, Jenkins, Git), EDI Solutions, Real-time Systems, Dashboard Development, API Integration, RPA, NLP, Statistical Analysis, Data Visualization (PowerBI, Tableau), Linux Administration, Cross-functional Collaboration, Project Leadership

### **Technical Skills**

- **Programming:** Python, R, SQL, Java, JavaScript
- **ML Frameworks:** TensorFlow, PyTorch, scikit-learn, Pandas, NumPy
- **Computer Vision:** OpenCV, YOLO, DeepSORT
- **Generative AI:** Langchain, RAG, BERT, CrewAI, BeamAI
- **DevOps:** Docker, Jenkins, Git, Airflow
- **Cloud:** AWS, GCP
- **Data Visualization:** PowerBI, Tableau, Grafana
- **Environments:** Firebase Studio, Cursor, VS Code, RStudio, Linux
- **Productivity:** Jira, Confluence, Monday
- **Administration:** Google Workspace, Microsoft 365

### **Soft Skills**

- Process Improvement, Problem-solving, Team Leadership, Documentation Management, Escalation Management, Communication

## **EDUCATION**

### **Columbus State University** (Georgia, USA)

Aug 2022 - Dec 2023

Master of Science in Computer Science (Artificial Intelligence and Machine Learning)

GPA 4.00 / 4.00

### **L. D. College of Engineering** (Gujarat, India)

Jul 2016 - Jul 2020

Bachelor of Engineering in Electronics and Communication

GPA 8.38 / 10.00

## **CERTIFICATIONS**

**Machine Learning** (Stanford University), **R-Programming** (John Hopkins University), **Deep Learning** Specialization (Stanford University), **Data Science** (HarvardX), **Big Data** with SQL (Cloudera), **AWS** Fundamentals (Coursera), **GCP**.

## **PROJECTS**

### **Gen AI using Large Language Models** (Georgia, USA)

Open Source Project - Mar 2024

- Fine-tuned and deployed LLMs (BERT, RAG) in production using Docker and cloud platforms, increasing domain-specific NLP accuracy and scalability.
- Researched and implemented transformer-based architectures to enhance contextual understanding and relevance in real-world NLP applications.

### **Multi-Object Tracker Surveillance System** (Georgia, USA)

Open Source Project - Dec 2023

- Developed and implemented a DeepSORT-based multi-object tracking system, improving real-time surveillance precision by 6% and optimizing GPU deployment on NVIDIA Jetson by 15%.

### **Self-Driving Raspberry Pi Car** - Computer Vision and IoT (Georgia, USA)

Academic Project - Dec 2022

- Engineered an autonomous navigation system on Raspberry Pi with real-time object detection and path planning using machine learning algorithms.
- Integrated Tensor Processing Units (TPU) to accelerate inference, reducing system latency by 20%.
- Designed a Linux-based control system for seamless hardware-ML interaction.

### **Visualizing Citi Bike Trips with Tableau** (Gujarat, India)

Coursera Certified Project - Oct 2020

- Designed and published interactive Tableau dashboards to visualize and analyze urban mobility data.

### **Bird-Strike Prevention System** - Computer Vision and IoT (Gujarat, India)

Academic Project - Jun 2018

- Created a real-time bird detection and prevention system prototype using Caffe2, OpenCV, and Arduino for aviation safety.