Jemin Kachhadiya (Computer Engineer)

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SUMMARY

Over 4 years of experience in Automation, Python development, specializing in the deployment and optimization of machine learning models. Expertise includes computer vision, data science, and automating tasks to reduce human dependency, particularly in catering to real-time problems.

WORK EXPERIENCES

Automation and AI Engineer, Crysalis (Columbus, GA and St. Louis, MO) **Mar 2024 - Present**

- Developed and implemented EDI (Electronic Data Interchange) solutions to automate the transactional documents, enabling real-time, secure electronic delivery to receivers and significantly reducing manual processing time by 70%.
- Spearheaded a $110K Ethanol autonomous loadout project, reduced to $50K through in-house technical solutions, including auto BoL generation and secure server integration, reducing manual effort by 95%.
- Implemented truck weighing software, reducing manual steps by 20% and minimizing human error, while automating ticket information flow through custom email scripts, resulting in significant productivity gains.
- Led $80K Workbench+Security project, implementing live dashboards for critical decision-making by integrating Siemens historian and HPLC data, resulting in improved plant engineer insights and increased production capacity.
- Managed Google Workspace and Microsoft 365 admin portals, streamlining company policies and employee onboarding processes.
- Developed chemical supply chain inventory and purchase requisition system using Google's AppScript, enabling multi-level spending tracking to improve financial decision-making.
- Established a comprehensive IT ecosystem with Palo Alto Networks, enabling secure remote access to critical devices and implementing the Google ecosystem with AI integration to boost company-wide productivity.
- 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**

- Leveraged SAS to analyze extensive electronic health records, employing advanced statistical methods that led to a 15% improvement in patient outcome predictions.
- Engineered interactive PowerBI dashboards visualizing critical healthcare KPIs, resulting in a 20% reduction in patient wait times and optimized resource allocation.

Graduate Research Assistant, CSU (Columbus, GA – Hybrid) **Sep 2022 - Dec 2023**

- Developed a cutting-edge video surveillance system for US Army base, integrating real-time object classification and tracking, reducing human monitoring needs by 80% with alert notifications.
- Led automated data annotation pipeline operations, executing data preparation and cleaning for imagery datasets.
- Trained a high-performance computer vision model on NVIDIA Jetson, achieving a 0.84 mean Average Precision score.
- Managed model deployment in production, optimizing GPU computing efficiency by 15% through CUDA and implementing deep learning techniques for low power usage.
- Engineered Python API with JSON interface, enabling seamless real-time transmission of system responses to the Oracle database.

Application Development Associate, Accenture (Maharashtra, India – Remote) **Nov 2020 - Jun 2022**

- Implemented DevOps methodologies, automating data retrieval from Hadoop and AWS Athena in a Docker environment, and integrating data validation with Jenkins for efficient CI/CD pipelines.
- Collaborated with Goldman Sachs on financial data research, developing a comprehensive data visualization dashboard for reporting.
- Managed large-scale datasets on the AWS cloud platform, handling a financial data lake, and performing advanced analytics using APIs and the Airflow ETL tool.
- Developed script validation tool for leadership, independently saving over 100 hours of weekly manual effort.
- Trained an NLP model to interpret requirements and prioritize projects from compliance documents, enhancing decision-making processes.
- Designed and implemented RPA-based web and database automation testing in an agile environment, accelerating QA processes.

SKILLS

Technical Skills

- **Programming Languages:** Python, R, SQL, Bash
- **Machine Learning Frameworks:** TensorFlow, PyTorch, scikit-learn, Pandas, NumPy
- **Computer Vision:** OpenCV, YOLO
- **Generative AI:** Langchain, RAG, BERT, CrewAI, BeamAI
- **Software:** Linux, Google Workspace, Microsoft 365

Machine Learning Techniques

- **Computer Vision:** Object detection, image segmentation
- **NLP:** Language modeling, text classification, Transformer-based models

Platforms & Tools

- **Cloud Platforms:** GCP(experience), AWS(familiarity)
- **Environments:** Firebase Studio, Cursor, VS Code, RStudio
- **Software Development:** Git, Docker, Jenkins
- **Prompting:** Claude, Perplexity, Gemini
- **Data Science & Analytics:** Tableau, Google Colab, Appscript, Sheets, Grafana, Airflow
- **Productivity:** Jira, Confluence, Monday

Soft Skills

Problem-solving, Team management, Project execution, Finance acumen, Critical thinking, Business

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

- Optimized LLM performance through advanced fine-tuning techniques, improving accuracy in domain-specific tasks.
- Deployed LLMs in production environments using Docker and cloud platforms, ensuring scalability and efficiency.
- Conducted research on transformer-based architectures to enhance relevance and contextual understanding in NLP applications.

Multi-Object Tracker Surveillance System (Georgia, USA) Open Source Project - Dec 2023

- Engineered an advanced multi-object tracking system using the DeepSORT algorithm, achieving a 6% improvement in tracking precision for real-time surveillance applications.
- Optimized model performance for deployment on NVIDIA Jetson devices, enhancing GPU utilization by 15%.

Self-Driving Raspberry Pi Car - Computer Vision and IoT (**Georgia, USA**) Academic Project - Dec 2022

- Developed an autonomous navigation system for a self-driving car prototype using Raspberry Pi, implementing machine learning algorithms for real-time object detection and path planning.
- Integrated Tensor Processing Units (TPU) to accelerate model inference, reducing latency by 20%.
- Designed a Linux-based control system for seamless interaction between hardware components and machine learning models.

RF Buddy - Script Scanning Tool (**Maharashtra, India**) Accenture **Innovation** Project - Mar 2022

- Developed a custom code quality validation tool aligned with client specifications and employed a production-ready executable version.

Visualizing Citi Bike Trips with Tableau (Gujarat, India) Coursera Certified Project - Oct 2020

- Designed and disseminated insightful data visualizations utilizing Tableau dashboards.

Bird-Strike Prevention System - Computer Vision and IoT (**Gujarat, India**) Academic Project - Jun 2018

- Engineered a real-time bird detection system using Caffe2 and OpenCV, integrating with Arduino for active bird strike prevention in aviation environments.