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# Surya Prakash G

DevOps/MLOps Engineer

[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

## EXPERIENCE

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### Machine Learning Trainee

June 2025 – Present

Zoho Corporation

On-Site, Chennai

- **ZohoPolicy-RAG** - AI-Powered Policy Document Assistant

- **Architected and deployed a scalable Retrieval-Augmented Generation (RAG) platform**, integrating Zoho's proprietary LLM with **FastAPI microservices, LangChain pipelines, and a ChromaDB vector database**, enabling high-throughput semantic search and secure enterprise policy Q&A.
- **Improved policy compliance and knowledge accessibility** by building a **Streamlit-based natural language interface**, reducing manual document lookup by ~60% and empowering 1,000+ employees with **AI-driven, real-time insights** across internal policy documents.

**Tech Stack:** LangChain, Hugging Face Transformers, Python, FastAPI, ChromaDB, PyPDFLoader, Streamlit, ZIA LLM

- **ZIA-StepRecorder** - AI-Powered QA Automation & Documentation Tool (Product)

- **Built an end-to-end QA automation platform**, integrating a Python **Flask backend, Dockerized microservices, and CI/CD pipelines** to auto-generate test cases and documentation, reducing manual QA effort by 70% and accelerating release cycles.
- **Developed a Chrome extension with JavaScript and service workers** to capture DOM events and user actions, transforming unstructured interactions into structured, human-readable test cases via **LLM-powered parsing**, significantly improving QA coverage and reliability.

**Tech Stack:** Chrome Extension API, JavaScript, XML, HTML, CSS, Python, Flask, LLM Integration (Transformers), Docker, Linux Hosting, Bash, CI/CD.

- **ZIA-CodeDocumenter** - Intelligent Javadoc Generation Agent

- **Developed an AI-powered documentation engine** that automated Javadoc generation for enterprise Java codebases, leveraging **Flask REST APIs, Streamlit UI, and CI/CD integration**, reducing documentation time by 95% and accelerating developer velocity.
- **Enhanced LLM accuracy with advanced prompt engineering and custom Java parsing (javalang)**, enabling precise handling of **inheritance, method overloading, and complex class hierarchies**, resulting in highly reliable, production-ready documentation.

**Tech Stack:** Python, LLM (Prompt Engineering), Flask, REST APIs, javalang, Streamlit, Markdown, Java

### Data Analyst & DevOps (Intern)

Mar 2025 – June 2025

Zoho Corporation

On-Site, Chennai

- **Automated Service Gateway with NGINX**

- **Built a scalable reverse proxy gateway with Docker Compose (IaC)** to centralize service routing, automate SSL/TLS lifecycle with Let's Encrypt, and integrate DuckDNS for dynamic DNS — reducing secure service deployment time by 90% and ensuring 100% encrypted traffic.
- **Streamlined network management and boosted developer productivity** by delivering a unified GUI that abstracted complex NGINX configurations, enabling frictionless onboarding of new services and improving overall system availability.

**Tech Stack:** NGINX, Docker, Docker Compose, Let's Encrypt, SSL/TLS, DuckDNS, IaC, Bash, Linux

- **AI-Powered Sales Automation & CRM Tooling Suite**

- **Designed and deployed LLM-powered automation features** to extract and classify Next Best Actions (call, meeting, email) from unstructured sales notes, and built Playwright-based data population pipelines that reduced QA setup time by 80% and accelerated CRM feature testing.
- **Implemented advanced synthetic data generation and processing pipelines**, including a Markov Chain-based simulator for realistic customer deal flows and conversion utilities (JSON/Parquet to CSV), enabling robust validation of NBA logic and scalable test automation.

**Tech Stack:** Python, Faker, NumPy, pandas, Playwright, LLMs (Ollama, Qwen), Markov Chains, Data Processing (JSON, Parquet), Automation Scripting

## PROJECTS

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### Docker Image CI/CD Pipeline with GitHub Actions [🔗](#)

- Developed a complete CI/CD pipeline for a Docker-based Angular application using GitHub Actions, automating builds and reducing deployment time by 50%.
- Integrated Docker Hub authentication for secure and streamlined image deployment into the automated workflow.

## Real-Time AWS Infrastructure Monitoring [🔗](#)

- Configured AWS CloudWatch to monitor EC2 CPU utilization in real-time, setting up alarms to trigger automated instance shutdowns when usage exceeded 80%, reducing costs by 20%.
- Implemented AWS CloudTrail with multi-region logging to track API activity and security events, improving incident response efficiency by 30% through log analysis with AWS Athena.

## Human Detection in Drone Footage using YOLOv11 [🔗](#)

- Developed a human detection system for drone footage by fine-tuning a YOLOv11-OBB model, focusing on improving feature detection for increased accuracy and reliability.

## Automatic Number Plate Recognition using YOLOv8 [🔗](#)

- Leveraged YOLOv8 for real-time license plate detection and Optical Character Recognition (OCR) for text conversion, continuously updating the model to enhance performance.

## SKILLS

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**Programming Languages** Python, C, Bash

**DevOps & CI/CD** Docker, Kubernetes, GitHub Actions, Jenkins, Terraform, Ansible, Git/GitHub/GitLab

**Cloud & Infrastructure** AWS (Certified), Google Cloud, Microsoft Azure, Vercel

**Web & Databases** Angular, Node.js, Django, HTML, CSS, MySQL, NoSQL

**Tools & Concepts** Playwright, Pandas, VMware, VirtualBox, Networking (TCP/IP), Machine Learning, Cybersecurity, MS-Excel

## EDUCATION

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**Bachelor of Engineering, Computer Science**

S.A. Engineering College, Chennai, India

**Oct 2021 – April 2025**

*CGPA: 8.5/10.0*

**Higher Secondary Education (HSE)**

Jaya Matriculation Higher Sec School, Chennai, India

**Mar 2020 – Mar 2021**

*Percentage: 80%*

**Secondary Education (SSLC)**

Jaya Matriculation Higher Sec School, Chennai, India

**Mar 2018 – Mar 2019**

*Percentage: 72%*

## CERTIFICATIONS

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- **AWS Cloud Certification** [🔗](#) - Kyndryl University (Jun 2024)
- **Cisco Networking Basics** [🔗](#) - Cisco Networking Academy (Jan 2025)
- **Introduction to Containers with Docker, Kubernetes, & OpenShift** [🔗](#) - Coursera (Nov 2024)
- **Google Cloud Fundamentals: Core Infrastructure** [🔗](#) - Coursera (Sep 2024)
- **IBM Introduction to DevOps** [🔗](#) - Coursera (Sep 2024)
- **Foundations of Cybersecurity** [🔗](#) - Coursera (Mar 2024)
- **IBM Introduction to Cybersecurity Tools & Cyber Attacks** [🔗](#) - Coursera (Sep 2024)

## AWARDS & HONORS

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- **Winner** - An Inter-Department Hackathon (Front End Web Design) | Live Website [🔗](#)
- **Winner** - CSI Student Chapter (Webpage Designing) | Live Website [🔗](#)
- **Conference Paper**: Face Detection and Recognition for Criminal Identification Systems Using Deep Learning | Springer Link [🔗](#)