Dharmendiran E

Automation Engineer (SDET)

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○ GitHub

PROFILE

Automation Engineer (SDET) with **3.6 years of experience** in designing and developing **scalable test automation frameworks**, **AI-driven QA accelerators**, and **cloud-based testing solutions**. Skilled in **Python, Selenium WebDriver, Robot Framework, BDD (Cucumber), REST API testing, SQL, Jenkins CI/CD, and AWS automation (Boto3)**. Hands-on expertise in **deploying ML models using AWS SageMaker**, **building GenAI-powered test scenario generators**, and **automating cloud infrastructure for QA workflows**. Proven track record of **reducing manual testing effort**, **increasing automation coverage**, and **expediting release cycles** in **Agile Scrum environments**.

PROFESSIONAL EXPERIENCE

Automation Engineer - Cigna HealthCare,   07/2022 – present | Chennai, India
Tata Consultancy Services

- Developed and maintained end-to-end automation test scripts using **Python, Selenium WebDriver, and Robot Framework**, increasing regression test efficiency by **30%** and enhancing release stability.
- Designed and executed **BDD test cases using Gherkin and Cucumber**, improving requirement-to-test traceability and collaboration across QA, development, and product teams.
- **Deployed machine learning models using AWS SageMaker**, automating ML operational pipelines and reducing manual intervention by **70%** to improve model refresh and monitoring workflows.
- Integrated automated test suites into **Jenkins CI/CD pipelines**, enabling **continuous testing**, reducing manual execution effort by **40%**, and accelerating deployment cycles.
- Performed **REST API testing using Postman** and validated backend data using **SQL queries**, improving **API reliability, data consistency, and system quality** across multiple environments.
- Automated core **AWS services** using **Python (Boto3)** — including **Lambda, S3, RDS, Glue, and Redshift** — to streamline test environment provisioning, data generation, and workflow orchestration.
- Built a **GenAI-powered BDD Test Scenario Generator** leveraging Confluence documents to automatically create functional and regression test scenarios, reducing test design time by **60%**.
- Developed **QueryStudio AI**, a **browser-based Text-to-SQL simulation engine** that interprets schemas, generates SQL queries, and produces realistic mock data with **zero backend dependency**, significantly speeding up prototyping and validation.
- Collaborated in **Agile Scrum environments** using **JIRA, Zephyr, and Confluence** for sprint planning, user story refinement, test management, and release documentation to ensure quality delivery.

CORE SKILLS

Programming & Scripting:
Python, Core Java, JavaScript, Boto3, SQL

Cloud & DevOps:
AWS (Lambda, S3, RDS, Redshift, Glue, SageMaker, EC2, IAM, Step Functions, SQS), Jenkins, CI/CD Pipeline Integration, CloudFormation

AI & Machine Learning:
GenAI, LLMs (ChatGPT, Gemini, Claude), Amazon Bedrock, RAG pipelines, AWS SageMaker, prompt engineering

Version Control & Collaboration:
Git, GitHub, Confluence, JIRA, Zephyr

Test Automation Tools:
Selenium WebDriver, Robot Framework, Cucumber (BDD), PyTest Postman, JMeter

API & Database Testing:
REST API Automation, Postman Collections, JSON/XML Validation, SQL Queries, Data Validation

Test Methods & QA Practices
Functional Testing, Regression Testing, BDD, TDD, End-to-End Testing, Smoke/Sanity Testing, Data-Driven Testing, Agile Scrum

Methodologies:
JIRA, Zephyr, Confluence, VS Code, PyCharm, Curser

CERTIFICATES

- Microsoft Certified: Azure Data Scientist Associate 🔗

AWARDS

TCS AI Idea Igniter Award, *Tata Consultancy Services (TCS)*
Recognized as a **Milestone Achiever** in the **TCS^AI Hackathon** for submitting a **top-ranked innovative AI solution**, demonstrating strong expertise in **GenAI, problem-solving, and AI-driven automation**, and contributing **forward-thinking impact toward the future of AI**.

Best Automation Initiative Award, *Tata Consultancy Services (TCS)*
Recognized for developing a **GenAI-powered BDD Test Scenario Generator**, significantly improving test coverage and reducing manual effort.

EDUCATION

Madras Institute of Technology,   06/2018 – 07/2022 | Chennai, India
B.E - Automobile Engineering

DECLARATION

I hereby declare that all the information furnished above is accurate to the best of my knowledge and belief.

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