Shiva Narayan Dey

Automation Tester (Python & Java) | BDD Framework Specialist | Cloud & API Automation | AWS Certified | MCA Candidate

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# Summary

Automation Tester & SDET with 4+ years of progressive experience in designing and implementing API automation frameworks, backend job validation, cloud-based test automation, and AI-powered test tools. Expert in BDD frameworks (Behave, Cucumber, Gherkin), Pytest, Selenium, and Allure reporting, driving automation-first test strategies across multiple industries including aviation, healthcare, utilities, and HR.  
Strong in API contract testing, cloud integration validations (AWS), and developing end-to-end automation pipelines integrated with JIRA workflows. Additionally skilled in Python-based web development (Flask/Django) for building internal tools and automation dashboards.

# Work Experience

## Cognizant Technology Solutions

**Programmer Analyst | Nov 2020 – Present (4 years 6 months) | Hyderabad**

## Key Automation Projects

### Centrica (Energy & Utilities)

* Transitioned from **Java-Selenium automation** to a testing-centric role, focusing on both functional and integration testing.
* Developed and executed automated test cases for customer portal features, utilizing **Java Cucumber** and **Avanstac** for behavior-driven development (BDD).
* Led **API testing** and validation efforts using **JUnit** to ensure backend and front-end systems communicated smoothly.
* Conducted regression testing to validate energy data management features and sales manager profile functionality.
* Implemented **performance testing** to ensure scalability under high traffic, including load and stress testing.
* Created and managed **test reports** to provide clear insights into system performance and test outcomes.
* **Technologies**: Java (Cucumber, Avanstac, JUnit), Selenium, Test Reporting Tools.

### Melbourne Airport (CRM Tool)

* Developed and executed comprehensive **end-to-end test strategies** for ticket management systems and workflows.
* Automated functional and **API testing** using **Java-Selenium** and **Java Cucumber**, ensuring robust integration with schema-less NoSQL databases.
* Led testing for customer query management workflows, including forms and bots for efficient support system interactions.
* Validated ticket queuing and **SLA tracking** systems to ensure proper priority handling and timely issue resolution.
* Integrated advanced **test reporting frameworks** to provide real-time insights into system performance and test results.
* Conducted **User Acceptance Testing (UAT)** to ensure CRM system features met business requirements.
* Validated priority-based ticket queuing logic using **JUnit** to guarantee accurate ticket escalation handling.
* **Technologies**: Java (Cucumber, Avanstac, JUnit), Selenium, NoSQL, AWS ECS, Test Reporting Tools.

### 3. International Airlines Group (IAG) Pegasus

* Automated UI workflows with Selenium (Java) and API testing via Pytest.
* Developed and validated Flask-based microservices and APIs.
* Created test automation dashboards and executed backend job validations via AWS SSH.
* Tools/Skills: Selenium (Java), Pytest, Flask, AWS RDS, DynamoDB.

### 4. IAG DC-Exit (AWS Migration)

* Migrated legacy British Airways applications (e.g., DSIP, DSEU, Pegasus, AirOps) to AWS cloud infrastructure.
* Loosely coupled systems for scalability, leveraging Docker and ECS for containerized deployments.
* Worked on AWS Elastic Beanstalk and CloudFormation for infrastructure automation and deployment.
* Technologies: Python (Flask, Django), AWS ECS, Elastic Beanstalk, Docker, SQL, CloudFormation, AWS RDS.

### 5. SmartCase – AI-Powered Test Case Generator (Now Revenue-Generating)

*GitHub:* [*SmartCase*](https://github.com/shivadey108P/SmartCase)

* Designed and built an AI-based automated test case generation tool integrating **OpenAI API** with **Java Cucumber**, **JUnit**, and **Python Selenium** frameworks.
* Automated code export for test cases into **Java and Python automation frameworks**, reducing manual effort by 70%.
* Integrated **Allure reporting** (Python) and **JUnit/Avanstac reports** (Java) for automated execution reports.
* Managed API testing and deployment in **AWS ECS** and **Lambda environments**.
* Created data visualization dashboards using **Seaborn** and **Matplotlib** for test data analytics and resource management insights.

### 6. RTO Status – Office Attendance Tracker (Python Flask Web App)

* Developed a Python Flask web application for tracking Return to Office (RTO) status submissions from employees.
* Integrated SQLite database for storing daily attendance records.
* Designed an intuitive web interface using HTML, CSS, and Bootstrap for associates to log attendance.
* Enabled data export and visualization features using Pandas and Matplotlib for management reporting.
* Tools/Skills: Python (Flask), SQLite, Pandas, Matplotlib, HTML, CSS, Bootstrap  
  🔗 [GitHub Repository](https://github.com/shivadey108P/SmartCase)

### 7. RefZ (Referencing Portal)

* Test Lead: Managed automation and testing responsibilities.
* Developed and maintained a BDD API automation framework using Python Behave (Cucumber).
* Automated token-based authentication, mock response handling, and negative scenarios across AWS environments (DEV, UAT, PROD).
* Delivered clear test reports via Allure & HTML Reports, fully traceable through JIRA acceptance criteria.
* Collaborated with developers, raised bugs in JIRA, and provided test exit reports and test plans.

### 8. BAHS (British Airways Health Services)

* Test Lead: Oversaw all testing processes for the project.
* Automated health services API modules covering positive, negative, and config-based scenarios.
* Designed dynamic Entra token generation and AWS Lambda-driven tests.
* Developed Allure and HTML reporting dashboards for JIRA stakeholders.
* Participated in client meetings, ensuring software quality and providing test approvals.

### 9. People API (Employee Data Management)

* Test Lead: Led the testing strategy for this project, including API security and cyber assurance.
* Created a scalable API automation framework in Python Behave with Gherkin.
* Automated API scenarios including token validations, data integrity, negative case validation.
* Participated in cyber assurance of APIs and validated APIs against Swagger contracts.
* Integrated test results with JIRA workflows and ensured AWS Cognito, AppConfig validations.
* Managed Jenkins server for automation in PeopleAPI project and worked with Swagger for API contract validation.

# CORE AUTOMATION RESPONSIBILITIES

* Architected and maintained BDD and API automation frameworks using Behave, Pytest, Selenium, and Cucumber.
* Automated end-to-end and regression testing suites for cloud-hosted APIs and backend services.
* Developed dynamic Entra token generation and config validations across AWS environments.
* Integrated Allure/HTML reporting and ensured traceability to JIRA acceptance criteria.
* Performed selective manual validations for Swagger, S3, AppConfig, and AWS Glue jobs.
* Automated cloud workflows using AWS Lambda and CloudFormation.
* Regular contributor to GitHub version control processes — creating branches, making PRs, committing, merging, and deploying code.
* Participated in sprint planning, DevOps integrations, and CI/CD pipeline management.

# TECHNICAL SKILLS

## Automation Testing:

* Python (Behave, Pytest), Selenium (Python & Java), Cucumber, Gherkin, Postman
* REST & GraphQL API Automation (Requests, Postman, Entra Token, Session Handling)
* Jenkins Pipeline Automation, CI/CD Pipeline Management, Jenkins Server Setup
* Allure, HTML Reports, Entra Token Automation
* Backend Job Automation (AWS SSH, Linux Shell, Cron Jobs)

## Cloud & DevOps:

* AWS (ECS, Lambda, RDS, CloudFormation, Docker, AppConfig, Cognito, Glue, S3, CloudWatch Logs), boto3

## Web Development (Supportive Skills):

* Python (Flask, Django), HTML, CSS, JavaScript (React, Node.js), SQLAlchemy

## AI & ML Tools:

* OpenAI API, scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, AWS Bedrock (boto3)

## Databases:

* PostgreSQL, MySQL, AWS DynamoDB
* Automating SQL query validations, DB migration checks, and integration into CI pipelines

# Education

**SRM University (Masters)**  
March 2023 – March 2025

* Graduated with an outstanding with 9.8 SGPA.

**Notable Academic Projects at SRM University**

1. **Vagabond Vision** (Flutter Mobile Application)
   * AI-driven travel recommendation app.
   * Repository: [Vagabond Vision](https://github.com/shivadey108P/vagabond_vision).
2. **SmartCase** (Python Flask Web Application)
   * A test case generator application using PostgreSQL for database management.
   * Repository: [SmartCase](https://github.com/shivadey108P/SmartCase).

### Bhavan's Vivekananda College (Graduation) June 2017 – November 2020

* Graduated with an outstanding 9.51 GPA.
* Awarded 1st Prize in Android Application Development.
* Secured 1st Prize in Poster Presentation at the *From Big Bang to Black Holes* Event.
* Participated in a one-day Outreach Program at the *National Balloon Facility* (TIFR).
* Completed coursework in Android App Development.
* Honored with the title *Mr. Technoment* by the Computer Science department.

### Bhavan’s Sri Aurobindo Junior College (Intermediate) July 2015 – April 2017

* Specialized in Mathematics, Physics, and Chemistry.
* Excelled with a 93% score in Intermediate.

### St. Ann’s High School (SSC Board/10th Class) June 2002 – April 2015

* Attained a remarkable 8.3 GPA in SSC 10th.

# Languages

* English (Full Professional)
* Hindi (Native or Bilingual)
* French (Elementary)
* Telugu (Limited Working)

# Certifications & Awards (Refined)

## Certifications:

* AWS Certified Cloud Practitioner (Credential ID: 9ddc675bcebd470fb458b0207b112c75).
* Udemy: Python 100 Days, 100 Projects Challenge ([GitHub Projects](https://github.com/shivadey108P/python_projects)).

## Honors & Awards:

* **Mr. Technoment**: Recognized for mentoring juniors in Android and web development.
* 1st Prize, Android App Development (Bhavan's Vivekananda College).