Saravana Kannan

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SUMMARY

Motivated and results-driven SDET with expertise in leveraging AI and machine learning techniques to enhance automated testing, predictive analytics, and system optimization. Over 13 years of experience in designing, developing, and executing intelligent automated testing solutions. Passionate about integrating AI-driven test automation frameworks, improving software quality, and optimizing performance testing strategies.

EXPERIENCE

Senior Software Development Engineer in Test

Starbucks Coffee Company   **April 2022 – Present, Seattle, Washington**

• Integrated AI-driven test automation solutions to enhance functional and performance testing efficiency.
• Developed machine learning models to predict system failures and automate root cause analysis, reducing debugging time by 40%.
• Designed and implemented an AI-powered log analysis system using NLP techniques to classify and prioritize errors.
• Led performance testing using JMeter, BlazeMeter, and LoadRunner, incorporating AI-based anomaly detection to improve test accuracy.
• Deployed CI/CD pipelines integrating GitHub, Azure DevOps, Docker, Playwright, Selenium.
• Grid, JIRA, and Allure Reporter, with AI-based failure analysis for faster resolution.
• Built an AI-powered test case generation framework, reducing manual effort by 30% and improving test coverage.

Software Development Engineer in Test

Tata Consultancy Services Limited   **November 2012 - April 2025, Bellevue, Washington**

• Automated T-Mobile Angular applications for web and mobile platforms using Protractor, Selenium, and JavaScript.
• Maintained CI/CD pipelines by integrating Protractor with Sauce Labs and SeleniumBox, parallelizing test executions.
• Designed and implemented a REST API and micro-services automation framework using CucumberJS, Protractor, and NodeJS.
• Created Java snippets to retrieve dynamic data from AEM nodes for validation in test scenarios.
• Led daily functional and regression testing and integrated sanity test execution with Jenkins, enabling continuous integration.
• Developed customized test execution reports using HTML and JavaScript, ensuring better insights into test results.
• Created and maintained a test trend analysis dashboard using Angular 8, Express, NodeJS, and MongoDB.
• Delivered knowledge transition training and mentored the team, improving performance and knowledge sharing.

PROJECT

AI-Powered Test Automation Framework

• Designed a self-healing AI-based test automation framework that dynamically adapts to UI changes and reduces maintenance effort.

Real-Time License Plate Recognition System

• Built an AI-based LPR system using YOLOv5 and OpenCV for automatic number plate recognition.

AI-Driven Player Selection for Fantasy Sports

• Developed a predictive model for Dream11, analyzing player performance using historical data.

AI-Based Sentiment Analysis for Defect Triage

• Created an NLP model to categorize and prioritize software defects, improving issue resolution efficiency.

SKILLS

Selenium, Playwright, JUnit, Jasmine, Protractor, Cucumber, Appium, AI-driven test automation

TensorFlow, Scikit-Learn, LLM, PyTorch, Generative AI Prompting

Python, Java, JavaScript, TypeScript, Shell Scripting

Jenkins, Azure DevOps, Git, Docker, Ansible, AI-driven CI/CD monitoring

JMeter, BlazeMeter, LoadRunner, AI-powered performance benchmarking

AWS EC2, Azure App Services, AI-driven log analysis, Grafana, Datadog, Splunk

MongoDB, PostgreSQL, AI-based test analytics

TestRail, Allure Reporter, AI-enhanced defect tracking