

# Nishant Singh

## Lead Software Development Engineer in Test

Pune, Maharashtra

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## Professional Summary

- 13+ years of experience as an SDET with expertise in Web, API, and Mobile test automation.
- Recently focused on leveraging AI/ML tools like Cursor, ChatGPT, Perplexity, and Agentic AI to accelerate automation script generation and enhance testing workflows, including AI/ML model validation
- Expert in planning and strategizing test architecture to align with business goals and engineering excellence
- Adept at leading high-performing SDET, QA, setting KPIs, defining test and release strategies, and implementing continuous testing and delivery.
- Proficient in designing frameworks using Java, OOPS, Data Structures, and Algorithms.
- Extensive domain expertise in Gaming, Banking, Logistics, Insurance, and Healthcare
- Hands-on experience in CI/CD, cloud testing environments, performance testing, and contract testing.
- Proven success in optimizing QA processes, reducing testing time, and improving product quality.
- A passionate technologist focused on solving complex engineering problems, driving process efficiency, and building a culture of quality and collaboration.

## Skills

- **Automation Tools** - Selenium, Playwright, Appium, Rest Assured, TestNg, Postman, Pact.io, Jest, Chai, Mockito, Calabash, Cucumber, QTP
- **Languages** - Core Java, JavaScript, Python, Dart
- **AI/ML** - CursorAI, RAG framework, Ragas, ChatGPT, Perplexity, Context Engineering
- **Performance Testing** - Jmeter, Locust
- **Database** - MongoDB, MySQL, PostgreSQL
- **CI/CD** - Jenkins, Gitlab-CI
- **Cloud & Devops**- GCP, AWS, Docker, Kubernetes, Terraform, Ansible
- **Test Management & Reporting**- Jira, TestRail, Allure, HP ALM
- **Monitoring & Messaging** - Dynatrace, Kafka, Grafana, Prometheus
- **Version Control**- Github, Gitlab
- **Others**- Framework development, Contract Testing

## Work Experience

### Lead Software Development Engineer in Test

Dream Game Studios, <https://www.dreamgamestudios.in/>, Pune, Maharashtra

Sep 2023 - Present

- Established and scaled QA operations by building a 10-engineer quality assurance team, implementing enterprise-wide testing strategy that reduced overall testing time by 30% and improved API performance
- Designed and implemented a comprehensive automated **performance testing suite**, used consistently across all release cycles to validate API standards and maintain response time SLAs.
- Collaborated with backend QA engineers to define testing requirements, develop test cases, and integrate automated tests into the **CI/CD pipeline**.
- Worked closely with game testers to streamline issue identification during releases, leading to faster feedback loops and reduced test plan execution time.

- Integrated AI tools (Cursor, ChatGPT, Perplexity) to generate functional and performance test scripts from specifications using advanced context engineering techniques.
- Used agentic AI to simulate user journeys and edge case validations across web and API testing.
- Performed AI/ML testing including model response validation, fairness checks, and bias detection using synthetic data and statistical assertions.
- Developed performance test scripts that automated environment setup and reporting, increasing efficiency and reducing manual overhead.
- Conducted training sessions for the QA team on adopting and using the new test framework, improving test coverage and accelerating execution cycles.
- Actively troubleshoot and resolve complex testing-related issues in coordination with developers, driving improved overall software quality.

**Skills and Tools:** Rest Assured, Ragas, Context Engineering, CursorAI, Java, TestNG, Playwright, Maven, Docker, Kubernetes, GCP, JMeter, Gatling, Jira, mitm proxy, PostgreSQL

#### **Key Achievements:**

- Reduced overall testing time by **30%** through the development and rollout of a streamlined automated testing framework.
- Improved API performance consistency by **20%** through a robust, automated performance testing suite.
- Enhanced test coverage and precision, contributing to consistently higher quality releases and improved user satisfaction
- Integrated AI tools (Cursor, ChatGPT, Perplexity) to generate functional and performance test scripts from specifications using advanced context engineering techniques.

### **Lead Software Development Engineer in Test | Automation Specialist**

Dkatalis Labs, <https://dkatalis.co/>, Pune, Maharashtra

Jun 2021 - Sep 2023

- Led and mentored an automation team of 8, overseeing end-to-end frontend and backend automation for a high-traffic digital banking platform.
- Developed and maintained scalable test automation frameworks using **Flutter Driver**, **Dart**, **Jest**, **JavaScript**, and **Node.js**, enhancing test efficiency and coverage.
- Built internal utilities and automation tools to support cross-functional teams, significantly reducing manual testing efforts and increasing team productivity.
- Ensured high-performance test execution by building robust automation frameworks and maintaining their seamless integration with the development pipeline.
- Managed and maintained infrastructure for the in-house test reporting tool, enabling accurate and timely delivery of test results.
- Administered and optimized **CI/CD pipelines** using **GitLab CI**, handling job creation, updates, and troubleshooting to support continuous integration and deployment workflows.
- Collaborated closely with QA, DevOps, and Development teams to ensure test strategies aligned with deployment and release goals.

**Skills and Tools:** Flutter Driver, Dart, Jest, JavaScript, Node.js, GitLab, Gitlab-Ci, Jira, BrowserStack, AWS, MongoDB, Docker, Kubernetes, Helm

#### **Key Achievements:**

- Streamlined test automation processes, reducing manual testing efforts by 25% across QA teams.
- Increased test coverage and reliability by designing robust frontend and backend automation frameworks.
- Improved deployment frequency and release stability by effectively managing and maintaining CI workflows.

## Senior Software Development Engineer in Test

Turvo Inc, <https://turvo.com/>, Hyderabad, Telangana

Oct 2018 - Jan 2021

- Led a team of 6 QA engineers across multiple application areas including **Tender Creation, Notification, Messaging, and Turvo Payment Solutions**.
- Utilized **Rest Assured, Selenium, and Java** to enhance test automation across web and API layers.
- Updated the automation framework to support **messaging API** test cases, improving coverage and enabling end-to-end validation of communication flows.
- Coordinated **release certification** efforts, ensuring smooth, timely, and high-quality production releases.
- Maintained and enhanced automation scripts in alignment with evolving application features and business requirements.
- Managed QA activities under the **Functional Certification (FC)** process, ensuring compliance with established testing standards and practices.
- Built **mock web services** to simulate 3rd-party vendor APIs, enabling more controlled and robust testing scenarios.
- Supported **Turvo Payment Solutions** by automating tests for various payment methods, including **ACH and Paper Checks**, improving confidence in financial operations.
- Created and maintained **CI jobs in Jenkins** to trigger automatic execution of the regression suite, ensuring consistency and speed in test cycles.
- Proactively resolved automation issues and improved framework performance, contributing to the reliability and maintainability of the testing infrastructure.

**Skills and Tools:** Rest Assured, Selenium, Java, Jenkins, Appium, GCP, Docker, TestNG, JMeter, Jira, BrowserStack, MongoDB, Docker

### Key Achievements:

- Expanded framework capabilities by integrating **messaging API test cases**, enhancing test depth.
- Strengthened release readiness through streamlined **release certification** and automated regression testing.
- Increased test reliability and flexibility by building **mock services** for 3rd-party API simulation.
- Improved test coverage and efficiency in **payment workflows**, ensuring stable support for ACH and paper check methods.
- Boosted automation speed and consistency through **CI integration**, optimizing overall test execution time.

## Lead Quality Control

Synechron Pvt Ltd, <https://www.synechron.com/>, Bangalore, Karnataka

Nov 2016 - Oct 2018

- Updated and enhanced the existing automation framework to improve **maintainability, scalability, and long-term adaptability** to application changes.
- Created and maintained automation test scripts using **Selenium, Java, and TestNG**, ensuring alignment with evolving business requirements and application updates.
- Monitored test execution and validated the performance, reliability, and accuracy of automated test cases across release cycles.
- Executed regression suites and conducted detailed **failure analysis** for each release, helping to ensure stability and early defect identification.
- Developed internal tools to support QA and development teams, significantly reducing manual work and increasing overall efficiency.
- Collaborated with cross-functional teams to continuously refine automation practices and integrate improvements into CI pipelines.

**Skills and Tools:** Selenium, Java, TestNG, Maven, Jenkins, Jira

**Key Achievements:**

- Enhanced framework structure to support faster updates and better scalability as application complexity grew.
- Boosted test performance and reliability by proactively monitoring testing processes and refining test coverage.
- Increased team efficiency by building custom internal tools that automated repetitive tasks and reduced manual effort.
- Improved product stability through meticulous execution and analysis of automated test runs during every release cycle.

**Module Lead**

Mindtree Ltd, <https://www.mindtree.com/>, Bangalore, Karnataka

Nov 2015 - Nov 2016

- Developed and maintained multiple **regression automation suites** using **Selenium** and **Java**, ensuring comprehensive coverage across application features.
- Conducted **cost-benefit analyses** to assess the ROI of proposed upgrades to the automation framework, guiding strategic investments in tooling and architecture.
- Collaborated with the **Mindtree Center of Excellence (COE)** team to initiate and set up **mobile application automation** testing projects using **Appium**.
- Delegated tasks based on team members' technical strengths, optimizing resource utilization and maintaining a steady workflow across multiple initiatives.
- Provided ongoing **mentorship and training** to junior automation engineers, promoting knowledge sharing and adherence to best practices in test automation.

**Skills and Tools:** Selenium, Java, Appium, Rest Assured, Jenkins, TestNG, Jira

**Key Achievements:**

- Improved test efficiency and product confidence by implementing and maintaining robust **regression test suites**.
- Enabled informed decision-making on framework evolution by performing effective **cost-benefit evaluations** for automation investments.
- Successfully **launched mobile automation initiatives**, accelerating mobile QA readiness and delivery timelines.
- Elevated team capabilities and productivity through effective **task delegation** and **mentorship**, leading to higher quality deliverables.

**Consultant**

Capgemini India Pvt Ltd, <https://www.capgemini.com/>, Bangalore, Karnataka

Aug 2014 - Nov 2015

- Designed and developed a **new automation framework from scratch**, enabling support for both **Appium** and **Selenium** to cover mobile and web testing needs.
- Enhanced an existing test automation framework by introducing new capabilities and improving performance, scalability, and maintainability.
- Created and configured **Jenkins jobs** to support **Android application development and testing**, enabling seamless **CI/CD** pipelines for faster delivery.
- Conducted **Proofs of Concept (POCs)** for multiple mobile automation tools including **Cucumber**, **Calabash**, and **Ranorex**, supporting tool selection for the **Capgemini Mobile Center of Excellence (COE)** team.
- Integrated various **reporting tools** with the automation suite to improve visibility, accuracy, and stakeholder communication.

- Provided hands-on support to multiple projects for **setting up mobile test automation**, ensuring smooth onboarding and adoption of automated mobile testing practices.

**Skills and Tools:** Selenium, Java, Appium, Rest Assured, JMeter, Jira, Cucumber, Calabash, Ranorex, Perfecto, TestNG, Jenkins

#### Key Achievements:

- Built a **cross-platform automation framework** supporting both mobile and web, increasing reusability and reducing framework duplication.
- **Streamlined CI/CD workflows** by implementing Jenkins pipelines for Android testing, leading to faster and more reliable mobile app releases.
- Guided strategic decisions on mobile automation tooling through effective **POCs and tool evaluations**.
- Improved testing transparency and effectiveness by **integrating advanced reporting solutions** into the automation ecosystem.
- **Accelerated mobile automation adoption** across multiple projects by enabling smooth framework setup and team onboarding.

#### Programmer Analyst

Cognizant Technology Solutions, <https://www.cognizant.com/>, Kolkata, West Bengal

Dec 2011 - Aug 2014

- Analyzed **business and functional requirements** to create comprehensive test plans, ensuring robust coverage for both **positive and negative test scenarios**.
- Designed and implemented an **automation testing suite for regression testing**, verifying core functionalities across multiple releases.
- Developed **automation design frameworks** and structured **test data grids** to improve the maintainability and scalability of automated tests.
- Maintained and enhanced **QTP (QuickTest Professional)** scripts to reflect application changes across release cycles, ensuring test suite relevancy.
- Executed **automated regression suites using QTP** for each release, contributing to consistent, stable performance across versions.
- Created and maintained detailed **automation documentation**, including user guides and functional understanding documents, supporting knowledge transfer and maintainability.

**Skills and Tools:** QTP, VB Scripting, Jira, Jenkins

#### Key Achievements:

- Created **comprehensive test cases** that improved defect detection by addressing a wide range of functional scenarios.
- Enhanced the **automation framework** to support fast, efficient regression testing and seamless integration with change requests.
- Improved application **release quality and stability** through consistent and thorough automated test execution.
- Developed **supporting documentation** that enabled better framework adoption and easier long-term maintenance.

## Education

#### Bachelor of Engineering: Computer Science

Annamalai University, Chidambaram, Tamil Nadu

2007 - 2011

## Certifications

- ISTQB Foundation Level (ITB Board) certified.
- Android development course from Udemy