

Raviteja Vemulapelli

Senior AI Engineer / Lead Automation Engineer/AEM Developer

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Professional Summary

Senior AI Engineer and Automation Lead with 9+ years of experience in AI/LLM Solutions, Agentic AI Systems, Multi-Agent Frameworks, Quality Engineering, Test Automation, and Enterprise Software Delivery. Hands-on experience designing and deploying production-grade autonomous AI agents, RAG pipelines, and LLM-powered solutions on AWS. Strong Python and Java engineering background with proven expertise building scalable automation frameworks, leading onsite and offshore teams, and delivering complex enterprise applications. Published mobile applications on Apple App Store and Google Play Store.

Core Skills

Python, Java, Agentic AI, Multi-Agent Systems, LangChain, LangGraph, AWS Bedrock, SageMaker, RAG, LLM, Prompt Engineering, Vector Databases, Embeddings, MLOps/LLMOps, Tosca, Selenium, API Testing, Postman, SoapUI, SQL, Microservices, CI/CD, Automation Framework Design, React Native, Firebase, Agile, Jira, Octane, Leadership

Certifications

- Tricentis Tosca Certified Professional
- Enterprise Test Automation and Quality Engineering

Professional Highlights

9+ years of hands-on software engineering with strong Python and Java expertise across AI, automation and enterprise platforms.

Design and deploy agentic AI and multi-agent systems for autonomous digital engineering workflows on AWS.

Build production-grade LLM solutions using LangChain, LangGraph, AWS Bedrock and RAG pipelines.

Automated 1200+ test cases in Tosca across enterprise mobile and web platforms at Charter Communications.

Lead onsite and offshore engineering teams delivering AI-powered automation and quality solutions.

Published applications on Apple App Store and Google Play Store with full-stack mobile development expertise.

Professional Experience

Charter Communications (Spectrum Mobile) | Lead Automation Engineer / Automation Lead | Feb 2020 – Present

Design and develop agentic AI and multi-agent systems using Python, LangChain and AWS Bedrock for autonomous test intelligence and workflow automation.

Build and deploy RAG pipelines with vector databases and embeddings for intelligent knowledge retrieval across enterprise testing documentation.

Lead enterprise testing initiatives across mobile, web, backend and API platforms.

Develop autonomous AI agents with tool/function calling, planning and reasoning loops to automate repetitive engineering and QA workflows.

Design and maintain scalable Tosca automation frameworks with 1200+ automated test cases.

Architect multi-agent orchestration frameworks using LangGraph for coordinated autonomous task execution across testing pipelines.

Implement LLM-powered chatbot solutions integrated into web-based platforms for self-service test execution and defect analysis.

Drive integration testing, API validation and end-to-end business workflow testing.

Operationalize AI agents and LLM pipelines with CI/CD, monitoring, evaluation and guardrails for reliability at scale.

Integrate AI agents into existing Java and Python applications and AWS-based enterprise platforms.

Lead offshore and onsite QA resources and mentor automation engineers.

Create test strategies, automation roadmaps and release validation plans.

Develop prompt engineering strategies, evaluation frameworks and responsible AI guardrails with human-in-the-loop governance.

Coordinate with developers, architects, product owners and business stakeholders to translate business needs into production-grade autonomous solutions.

Manage test execution, reporting, defect management and release readiness activities across multiple releases.

Tata Consultancy Services – Thomson Reuters | Senior AEM Developer | Jul 2019 – Jan 2020

- Developed Adobe Experience Manager solutions for enterprise publishing platforms.
- Designed reusable AEM components, templates, dialogs, workflows and services.
- Built OSGi bundles, Sling Models, Sling Servlets and REST integrations.
- Collaborated with business stakeholders to gather requirements and implement solutions.
- Developed and maintained content management workflows and publishing processes.
- Participated in Agile ceremonies, sprint planning and release activities.
- Provided production support and resolved performance bottlenecks.
- Integrated third-party services and APIs with AEM applications.
- Performed code reviews, testing and deployment support activities.
- Worked across Development, QA, UAT and Production environments.

State Street Global Advisors | Senior AEM Developer | Feb 2019 – Jun 2019

- Developed custom AEM 6.4 components, templates, dialogs and page structures for enterprise financial web platforms.
- Built OSGi services, Sling Servlets and Sling Models for dynamic content rendering and API integrations.
- Created and maintained client libraries (CSS/JS) using HTL/Sightly templating for responsive front-end delivery.
- Developed content workflows and approval processes for regulated financial content publishing.
- Integrated AEM with third-party financial data services using RESTful APIs and custom connectors.
- Performed production deployments using Maven, Adobe Cloud Manager and CRX Package Manager.

- Provided production support, troubleshooting dispatcher caching issues and performance bottlenecks.
- Conducted performance tuning of JCR queries, indexing strategies and bundle configurations.
- Participated in Agile sprint ceremonies, code reviews and release planning activities.
- Worked across Development, QA, UAT and Production environments following enterprise release processes.

PLCB | AEM Developer | Feb 2018 – Jan 2019

- Developed reusable AEM 6.3 templates, components and content fragments for public-facing government web platform.
- Built Sling Models, OSGi services and custom workflows for content authoring and approval processes.
- Implemented responsive web solutions using HTL, CSS3, JavaScript and Bootstrap framework.
- Created DAM asset management workflows and metadata schemas for digital media content.
- Developed Sling Servlets and REST endpoints for dynamic content delivery and third-party integrations.
- Configured AEM Dispatcher for caching optimization, URL mapping and load balancing.
- Automated deployment pipelines using Maven, Jenkins and AEM package management tools.
- Performed content migration from legacy CMS to AEM using custom migration scripts and tools.
- Collaborated with UX designers and business analysts to translate requirements into AEM solutions.
- Supported QA, UAT and production environments with defect resolution and release activities.

Personal Products & Innovation Projects

- Snaptura: Developed a Windows desktop application using Python for automated testing evidence capture, annotation and Word document generation with zero cloud dependency which is published in Software center whole Charter wide.

- **AI-Powered API Automation Platform:** Designed and built an autonomous multi-agent API testing platform using Python, LangChain and LLM APIs featuring dependency detection, variable discovery, API chaining, automated validation, self-healing execution and human-in-the-loop governance.
- **ConfessReels (confessreels.com):** Designed and launched an anonymous social networking platform published on Apple App Store and Google Play Store with authentication, moderation, messaging, reporting and engagement features. Available at apps.apple.com/us/app/confessreels/id6759240851 and Google Play Store.
- **SoloTravelSoul:** Built a cross-platform travel planning and social networking application using React Native and Firebase featuring itineraries, journals, social feeds, follows, comments and notifications.

Education

Master of Science – Computer Technology