

Abhinay Patthi

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SUMMARY

Lead Software Engineer with over 10 years of experience specializing in high-scale distributed systems and event-driven architectures. I architect cloud-native solutions that handle billions of records daily and support high-concurrency traffic with sub-second latency. My work integrates Generative AI and autonomous agents into operational workflows to eliminate manual engineering toil and drive developer productivity while ensuring enterprise-scale reliability.

TECHNICAL SKILLS

Programming Languages: Python, Java, C/C++

Artificial Intelligence: Generative AI (GenAI), Large Language Models (LLMs), Prompt Engineering, MCP (Model Context Protocol)

Frameworks and Tools: Spring, Spring Boot, FastAPI, Django, AWS Cloud, Apache Kafka, PostgreSQL, Redis, MongoDB, Kubernetes

DevOps/Tools: CI/CD (Jenkins/GitHub Actions), Docker, Git, JIRA

WORK EXPERIENCE

Lead Software Engineer

New York, NY

Financial Industry Regulatory Authority

Jan 2025 - Current

- Pioneered GenAI-driven operational efficiency by developing an autonomous AI Agent that automates Lambda runtime upgrades; reduced engineering manual effort by 80% and ensured enterprise-wide compliance with latest security patches.
- Architected a high-performance serverless REST API designed for high-concurrency data dissemination, maintaining consistent sub-second latency while handling peak traffic of 800+ TPS.
- Architected automated data ingestion process using Apache Kafka and Aurora PostgreSQL, processing over 1.2 billion records daily with high write throughput to support enterprise-scale data requirements.

Software Engineer

Rockville, MD

Financial Industry Regulatory Authority

Feb 2019 - Dec 2024

- Engineered an asynchronous, serverless RESTful API utilizing S3 pre-signed URLs, enabling high-performance bulk data retrieval while minimizing server load and bandwidth costs.
- Developed a standardized Lambda Authorizer for AWS API Gateway, adopted as the enterprise-wide security framework; reduced cross-team development cycles by 15% by providing a plug-and-play authentication solution for all microservices.
- Engineered a strategic migration of internal APIs to AWS Fargate, optimizing container orchestration and reducing infrastructure code by 62%.

Software Developer Intern

Bowling Green, Ohio

Senecio Corporation

Oct 2017 - Dec 2018

- Implemented a high-performance geospatial REST API using Redis Geohashing, enabling real-time location-based data retrieval with sub-500ms latency.

- Engineered an asynchronous backend service for event creation, optimizing multi-part upload logic to support high-volume media ingestion of files.
- Improved system responsiveness by offloading heavy media processing tasks to background workers, ensuring a seamless user experience during large file uploads.

Programmer Analyst

Pune, India

Cognizant Technology Solutions

July 2014 - Dec 2016

- Developed enterprise-grade web applications utilizing Spring Boot, implementing robust architectural patterns to ensure code maintainability and system scalability.
- Collaborated within a globally distributed Agile team to deliver modern web architectures, ensuring seamless integration across cross-functional modules.

EDUCATION

Bowling Green State University

Bowling Green, OH, USA

Master of Science in Computer Science

Dec 2016 - Dec 2018

Government College of Engineering

Amravati, Maharashtra, India

Bachelor of Science in Computer Science

June 2010 - April 2014

CERTIFICATION

- AWS Certified Developer Associate [Link](#)