

Mayank Manas

Backend SDE-2 - Java, Spring Boot, AWS

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Backend engineer (5+ YOE) building release infrastructure and AI-assisted engineering tooling for enterprise security products. I work on the systems that decide what ships, how it's validated, and how it's kept secure.

WORK EXPERIENCE

SDE II, Coriolis Technologies

Jul 2021 - Present

India

Engineering and release infrastructure for Imperva's database auditing Agent - a component installed on database servers and hosts to audit, monitor and secure database activity.

Internal Data Coverage & Compatibility Platform

Java 8, Spring Boot, MySQL

- Designed and developed the Internal Data Coverage Tool (IDCT), a Java 8, Spring Boot and MySQL platform used by ~40 engineers across 3 teams to manage Agent compatibility across ~300 OS/DB combinations and ~10,000 configuration permutations.
- Architected the data model, backend APIs and UI to represent and manage multi-dimensional compatibility across OS/DB versions, Agent modes, database configurations, encryption modes and other supported dimensions.
- Own the integration of the compatibility platform with the OS/DB support release pipeline, mapping support progression from development and certification through automation testing and final release coverage.
- Own Agent compatibility coverage, serving as the focal point for determining supported configurations, tracking coverage changes and history, and maintaining accurate OS/DB compatibility information through the release lifecycle.

Agent Release Infrastructure

Java, Linux, Windows, GDB

- Developed features for a Java-based remote execution service within the Agent testing platform, exposing APIs used by automation workflows to execute operations on remote Linux and Windows test machines.
- Developed a cross-platform core-dump diagnostics API that remotely retrieves crash dumps, processes them using native GDB, and returns structured diagnostic information including failure details, memory and heap information, and timestamps for developer debugging.
- Developed and maintained Java-based utilities and supporting services powering the Agent testing platform, implementing feature enhancements and resolving defects across the system.
- Owined a 28-day monthly Agent release cycle, coordinating validation across ~700 test environments, triaging failures, communicating defects with upstream development teams, and verifying fixes through subsequent test runs.

AI-Assisted Engineering

Python, Google ADK, Amazon Bedrock, Browser Automation

- Developed and deployed Python-based AI agents using Google ADK and Amazon Bedrock to automate release validation and Agent compatibility workflows used by engineering teams.
- Built an AI-powered release task validator that generates expected release permutations using OS/DB Cartesian products, applies maintained exclusions and support-date constraints, and compares expected coverage against release tasks to identify missing permutations.
- Developed a vendor compatibility agent that dynamically discovers and extracts OS/DB compatibility from vendor documentation and web-based compatibility matrices using web crawling and browser automation, classifies findings for human verification, and generates bulk compatibility updates through backend APIs.
- Implemented human-in-the-loop safeguards and persistent vendor-source context for compatibility discovery, requiring user validation before modifying compatibility data while retaining verified vendor sources for subsequent analysis.

File Tokenization & Encryption Proxy

Java, AWS S3, Azure, IBM COS, SFTP

- Engineered file tokenization and encryption pipelines for enterprise systems, supporting stream and field-level encryption in Java across diverse file types and storage systems.
- Designed multi-cloud data protection across AWS S3, Azure, IBM COS and SFTP, enabling secure handling of sensitive data across heterogeneous customer environments.
- Implemented RBAC and multi-tenancy to provide fine-grained access control and scalable tenant isolation for enterprise deployments.

SaaS Metrics & Resource Usage Platform

Kubernetes, Metrics Pipelines

- Built a resource tracking and optimization platform for SaaS deployments, collecting pod-level metrics across customer environments to guide resource allocation and scaling.
- Enabled data-driven resource allocation, reducing customer cloud infrastructure costs by ~11%.

REST API Based Encryption / Masking Service

Spring Boot, REST

- Developed a secure Spring Boot microservice exposing REST APIs for encryption, decryption and data masking, with unit, integration and end-to-end test coverage.

Dynamic Configuration Management System

Java, Distributed Systems

- Developed a configuration management system for distributed services, enabling dynamic cluster configuration and runtime resolution.
- Reduced deployment and service boot-up times by ~30% through dynamic configuration management.

Performance Benchmarking Tool

GitHub Actions

- Developed and automated a GitHub Actions-based benchmarking system to compare deployment performance across branches and releases and detect performance regressions early.

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript

Backend: REST APIs, Microservices, WebSockets, OpenAPI, Event-Driven Architecture, Remote Execution

Frameworks: Spring Boot, Spring Cloud, Google ADK, Playwright, Selenium

AI & LLM: Amazon Bedrock, Google ADK, AI Agents, LLM-based Workflow Automation

Cloud: AWS EC2, AWS S3, AWS Lambda, AWS IAM, AWS ECS, AWS SQS, AWS ELB

Design: Data Structures & Algorithms, LLD, HLD, Distributed Systems, Database Schema Design

Databases: MySQL, NoSQL, Elasticsearch

Containerization: Docker, Kubernetes

CI/CD: GitHub Actions

Monitoring & Logging: Kibana, Prometheus, Grafana

Queues: Kafka Streams

Security: JWT, RBAC, OAuth2, Data Encryption, Data Masking

Performance: Caching, Load Balancing, JVM Performance Tuning, Thread Dump Analysis, GDB

PROJECTS

FileServer

TypeScript, Node.js, Express, Jest

Secure HTTPS file server for LAN environments - streaming I/O for files up to 100 GB, path-traversal defense, IP whitelisting and structured logging.

- Streams files up to 100 GB without buffering
- HTTP Basic Auth with bcrypt, RFC1918 IP whitelist, rate limiting
- Winston structured JSON logging with rotation; jest + supertest coverage

<https://github.com/mayankmanas/FileServer>

BFS/DFS Visualizer

React, JavaScript

React application for visualizing graph traversal and node exploration in a grid-based system.

Exercise Tracker

React, Node.js, Express, MongoDB

Full-stack activity logging application with a React frontend and a Node/Express API.

EDUCATION

B.E. Computer Science Engineering, Chitkara University

Jul 2017 - Jun 2021

CGPA 9.3

- Scholar award for being in the top 1% of graduates