

# Arun Pal (Senior Java Backend Engineer)

Portfolio: [arunpal.vercel.app](https://arunpal.vercel.app)

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Location: Ghaziabad, India

## Education

- **Dr. APJ Abdul Kalam Technical University**

B.Tech – Computer Science and Engineering; CGPA: 7.2

Lucknow, India

Aug 2014 – Jul 2018

## Skills Summary

- **Core Skills:** Java, SQL, GO, Python, JavaScript, ExtJS, jQuery, Algorithms & Data Structures; System Design
- **Framework:** Spring Boot, Micronaut, Spring Cloud, Hibernate, Angular
- **DevOps & Cloud:** Docker, Kubernetes, Jenkins, CI/CD, SonarQube, Git/SVN, Datadog | AWS, AWS Bedrock AI
- **Databases & Messaging:** MySQL, MongoDB, Oracle DB, PostgreSQL, Redis, Apache Kafka, ElasticSearch
- **Big Data & Distributed:** Apache Spark, Apache Airflow, Temporal Workflow, Hadoop
- **Testing & Security:** JUnit 5, TestNG, Mockito, Gatling, Blackduck, Checkmarx, Container Scans
- **Performance Optimization:** JVM tuning, Thread dump analysis, Profiling tools

## Experience

- **Precisely Software & Data Solutions**

Senior Software Engineer

Noida, India

Oct 2021 – Present

- Developed end-to-end API solutions, covering functionality, performance optimization, security best practices (OAuth2, JWT), and robust error handling, ensuring seamless integration with microservices.
- Designed and implemented highly optimized, scalable APIs in Java, leveraging multi-threading, caching mechanisms (Redis), and efficient database interactions to improve response times by 30%.
- Managed API deployments on cloud platforms AWS with Kubernetes configuring API Gateway with authentication, rate limiting, DDoS protection, and logging mechanisms to enhance security.
- Conducted in-depth code reviews across multiple modules, ensuring adherence to clean code principles, SOLID design Patterns and performance optimizations, reducing production issues by 40%.
- Designed and implemented observability and logging mechanisms, using Datadog, improving system monitoring and incident response times., integrating JUnit 5, and Gatling into CI/CD pipelines to enhance reliability and deployment efficiency.
- Designed and implemented observability and logging mechanisms, using Datadog, improving system monitoring.
- Mentored junior developers and enforced clean code, SOLID, code reviews and Agile practices to improve delivery quality.

- **Trangle Software Solution**

Software Engineer

Noida, India

Feb 2020 – Sep 2021

- Partnered with cross-functional teams for requirement gathering and authored Technical Specification Documents (TSD).
- Developed Java and Oracle-based modules aligned with technical documentation and quality guidelines.
- Prepared code review reports and release documentation for UAT and production deployments.
- Integrated Advance Deposit and Prepaid Card payment modules across applications for seamless payment workflows.
- Migrated applications from OC4J to JBOSS; upgraded Java 5→8 and ensured Oracle DB compatibility and stable transition.

- **Vinculum Software Solution**

Associate Software Engineer

Noida, India

Jul 2018 – Jan 2020

- Assisted senior engineers in design and development of Java and Oracle-based solutions.
- Contributed to technical documentation for development, deployment and release processes.

## Projects

- **Bulk File Processing:** Designed and built an asynchronous large-file processing platform using AWS S3, Apache Kafka, Apache Spark and Temporal with chunk-based processing, multipart uploads, workflow retries and secure CSV export using pre-signed URLs.

- **DIS Data Quality Pipeline:** Developed Spark Streaming and Databricks pipelines with grouping and geocoding operators to automate data quality improvement and reduce manual data correction effort.

- **Swagger File Validation:** Created an automated framework to validate Swagger files by checking schemas, examples and generated Swagger clients, ensuring production-ready API specifications and consistent API responses.

- **Runtime Data Pipeline:** Implemented an Excel-driven CI/CD pipeline that uploads datasets to S3 and triggers automated data refresh workflows for the Addressing API without requiring code changes.

- **S3 CSV Chunk Processing:** Developed a high-performance CSV reader that processes large S3 files in non-overlapping chunks without line breaks or character overlap, supporting multi-byte characters with full data accuracy.

- **GeoPlaces Search Platform – Elasticsearch**

Built high-performance POI Search API using Elasticsearch with **geo-point indexing**, geo-distance/polygon queries, and custom scoring. Implemented **Logstash ETL** to ingest millions of CSV records with optimized index mappings and max result window (20,000). Developed Spring Boot search services using Bool/DisMax queries with efficient pagination and source filtering. Integrated with **AWS Elasticsearch Service**, tuning performance for sub-500ms responses.

- **AI-Powered Documentation Assistant:** Built a **production AI chatbot** using **AWS**, serving 100+ concurrent users with **99.5% uptime** and **95% answer accuracy**. Implemented **real-time streaming via WebSocket**, async concurrency control, and multi-stage validation to prevent AI hallucinations. Optimized system performance with **10x throughput** and **90% latency reduction**, while reducing infrastructure costs by 40% through **Redis caching**, input validation, and tiered model strategy. Delivered a **scalable, fault-tolerant architecture** with retries, circuit breakers, and graceful degradation.

## Certifications

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- **HackerRank:** Java, Problem Solving, SQL, CSS
- **Udemy:** Spring Boot Foundation, Micronaut, AWS