

Vinodhkumar Saminathan

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SUMMARY

Software Engineer with 4+ years of specializing in cloud-native Java services and distributed systems. Designed and shipped resilient microservices with Spring Boot, Kafka, Docker/Kubernetes, and automated pipelines on Azure and AWS—improving reliability, latency, and cost at scale.

EXPERIENCE

Research Assistant | DePaul University

Sep 2024 – Nov 2025

- Built a Java mining pipeline (Maven, JGit, RefactoringMiner, Designite/Understand) to auto-generate labeled datasets for Weka/MEKA, reducing data-prep time by 60% and scaling to 200k+ rows across multiple repos.
- Engineered features from code metrics, smells, churn, and dependency signals; aligned refactoring labels at method/class level, improving label precision by 15% and cutting noisy samples by 20%.
- Trained and tuned Random Forest, XGBoost, and SVM (plus MEKA multi-label) with k-fold CV and class rebalancing, boosting macro-F1 by 12–18% over baselines and producing reproducible runs (fixed seeds, scripts); leveraged Apache Spark for ETL/feature prep.

Software Engineer | Market Simplified

June 2022 – Aug 2023

- Built and maintained microservices with Spring Boot, Hibernate/JPA, and RESTful APIs; applied design patterns for scalable API and domain layers.
- Integrated Kafka for real-time messaging (with JMS where needed), cutting latency by 30% and enabling seamless distributed communication.
- Deployed Dockerized services on Kubernetes and leveraged AWS (EKS/ECS, Lambda, EMR, DynamoDB, Terraform), boosting scalability and performance.
- Improved observability with Datadog, ELK, Istio, and Log4j; enhanced monitoring and sped up incident resolution; enforced security (OAuth2, authentication/authorization, confidentiality).
- Managed CI/CD (Jenkins, Azure DevOps) and followed Agile/Scrum; worked with JBoss/WebLogic as needed and supported JSON/XML integrations.

Software Engineer | Virtusa

June 2019 – June 2022

- Designed and built resilient Spring Boot services and REST/SOAP APIs, strengthening modularity and fault isolation across microservices.
- Established an automated testing stack with Cucumber (BDD), Selenium WebDriver, and TestNG, standardizing Page Objects and living docs.
- Hardened CI/CD pipelines (Jenkins, Bamboo; build, test, scan, deploy) to accelerate feedback loops and improve release reliability; implemented Git-based DevOps workflows.
- Integrated JMS/Solace where required and tuned persistence with Hibernate/JPA against SQL Server, Oracle, and PostgreSQL.

Software Engineer Intern | Virtusa

Jan 2019 – June 2019

- Contributed to Spring MVC/Spring Boot microservices and REST/SOAP endpoints, following API design principles and enterprise application patterns.
- Wrote unit/integration tests (JUnit, TestNG, Mockito), improving coverage by 25% and validating JSON/XML contracts and WS-Security policies.
- Built ETL helpers and messaging POCs with JMS/Kafka and Apache Camel 3; optimized SQL queries for Oracle/PostgreSQL and documented workflows in Confluence.

PROJECTS

- Built incremental ETL for LinkedIn profiles & images with idempotent runs; reduced full reloads by 70% and validation effort by 40%.
- Applied SOLID with Singleton/Factory/Builder to modularize auth, catalog, orders; accelerated delivery by 25% and lifted test coverage to 65%.
- Implemented high-concurrency client-server with parallel indexing and multi-term search (TF-IDF/BM25); sustained high QPS with low p95 latency; shipped reproducible scripts.

EDUCATION

DePaul University | Chicago | Illinois | M.S in Computer Science

Sept 2023 – Nov 2025

Sri Eshwar College of Engineering | Coimbatore | India | B.E in ECE

April 2015 – May 2019

TECHNICAL SKILLS

- **Languages & Frameworks:** C, C++, Java, Node.js, PHP, Python, R, Spring Boot, Hibernate, JDBC
- **Front End Technologies:** HTML, CSS, Tailwind CSS, JavaScript, Typescript, jQuery, GraphQL, React.js
- **Databases:** SQL (MySQL, Oracle, PostgreSQL, PL/SQL), NoSQL (MongoDB, Redis)
- **Cloud & DevOps:** AWS, GCP, Microsoft Azure, Docker, Kubernetes, Postman
- **Certifications:** Docker Fundamentals Certification, OCJP (Java 8.0)