



AMAR VASHISHTH

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EDUCATION

Master of Technology | Computer Science

Indian Institute of Technology Madras (India's Top Engineering Institute)

2017 – 2019

Chennai, Tamil Nadu

SKILLS

Technologies:

- Python, Java, Javascript, Rust, C#, C/C++, PHP, Go, Typescript
- Actix Web, SpringBoot, FastAPI, Symphony
- ReactJS, node.js, nginx, apache-http-server
- Kafka, RabbitMQ, Redis, SockJS, Ansible
- Grafana, Prometheus, StatsD, InfluxDB
- Hurl, Behat, JUnit, Mockito
- Gatling, k6
- MySQL, MongoDB, CouchBase, Oracle
- Docker, Jenkins, Kubernetes, GitHub Actions
- Microsoft Azure, Amazon Web Services, Rakuten's One Cloud
- MATLAB, TensorFlow, Mathematica

WORK EXPERIENCE

Applications Engineer

Rakuten

July 2023 – Present

Crimson House, Tokyo, Japan

• Browsing History and Gift History Engineering:

- * Led migration to a modernized system architecture, sustaining high-throughput backend services with **peak traffic of 34K QPS**
- * Executed zero-downtime, rollback-safe **database migration** from Couchbase (NoSQL) to Oracle (SQL)
- * Drove **end-to-end frontend migration** for the *ashiato.rakuten.co.jp* store-front
- * Spearheaded infrastructure migration from **bare-metal servers to Cloud platform**
- * Designed and implemented production-grade **Jenkins CI/CD pipelines** for K8s deployments with real-time configuration updates
- * Established comprehensive observability, monitoring, and alerting to **improve system reliability and incident response**
- * Conducted large-scale **load and stress testing** for Rakuten Super Sale traffic events
- * Delivered critical business features, including implementation of **Furusato Nozei** tax policy changes
- * Developed extensive **automated test suites** for backend services and UI, ensuring robust pre-production validation

• Coupon Platform Engineering:

- * Orchestrated major **platform upgrade** from PHP 5 to PHP 8, including Symphony framework modernization
- * Engineered **performance optimizations** and feature enhancements for mission-critical systems
- * Established modern CI/CD infrastructure with automated build triggers
- * Optimized scheduled batch processes and executed infrastructure migration

Senior Software Engineer

Mynta (Flipkart)

July 2019 – July 2023

Bengaluru, Karnataka, India

- **Messaging Platform Engineering:**

- * Architected and maintained enterprise-scale messaging infrastructure handling **60K TPS**
- * Developed and maintained multi-language SDKs (Java, Python, JavaScript, Go)
- * Designed cross-datacenter topic replication system with self-service capabilities

- **Secured Kafka System:**

- * Designed and implemented enterprise-grade authentication and authorization framework
- * Developed granular access control system with incremental authorization capabilities
- * Integrated end-to-end encryption functionality across multiple SDK implementations

- **MFB PLM System:**

- * Led backend development of high-performance PLM system (100K RPM) using Spring Boot
- * Reduced operational costs significantly by implementing proprietary alternative to PRM360
- * Collaborated in four-person team to deliver enterprise-grade solution

- **KnowYourClient System:**

- * Architected real-time API protection and client metadata management system
- * Implemented non-intrusive access control layer processing 250K monthly requests
- * Developed dynamic API security without requiring existing service modifications

- **MFB-PLM Excel Plugin:**

- * Independently developed and deployed C# Excel plugin for streamlined PLM operations
- * Engineered automated spreadsheet validation and data upload functionality
- * Reduced manual processing time by implementing one-click operational workflows

- **Observability and Monitoring:**

- * Established comprehensive logging infrastructure utilizing ELK stack integration
- * Implemented automated alerting system leveraging Statsd, InfluxDB, Prometheus, and Grafana
- * Configured mission-critical monitoring with email and Slack notifications

- **Scheduler Lock:**

- * Designed and implemented robust database-driven scheduling synchronization system
- * Engineered solution ensuring single-instance schedule execution across distributed services
- * Enhanced system reliability through optimized concurrent process management

- **Containerisation:**

- * Worked extensively to containerize several back-end services in the team. The goto guy for team's Docker needs.

- **Load Testing:**

- * Responsible for performing rigorous load tests (stress testing) on Kafka Brokers before any critical events (such as online mega sale)

- **Database Migration:**

- * Responsible for migrating all services within the team to MySQL8, together with the DBOps Team

- **OnBoarding New Engineers:**

- * Usually I am made responsible to introduce new engineers into the team, and supporting them until necessary.

PROJECTS AND RESEARCH

Nutritional Information Analysis - Indian Cuisines:

- Developed machine learning model for automated nutritional content assessment
- Engineered comprehensive training dataset for Indian culinary analysis
- Implemented algorithmic estimation of nutritional values with high accuracy

Robotics Engineering:

- Designed and implemented autonomous navigation systems
- Constructed and programmed 4-wheeled robot utilizing Lego NXT architecture
- Developed control algorithms for precise movement and obstacle avoidance

Academic Research Projects:

- Implemented semantic web queries using SPARQL and RDF frameworks
- Developed Bayesian classification system for email filtering
- Integrated Gmail API with Java-based spam detection algorithm