



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
- 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 Engineering:

- * Architected and maintained high-throughput services processing 34K requests per second at peak load
- * Spearheaded frontend and backend development for ashiato.rakuten.co.jp ecosystem
- * Led infrastructure migration from Mesos to Rakuten's One Cloud, implementing Kubernetes-based containerization
- * Engineered Jenkins CI/CD pipelines and Kubernetes configurations with Istio service mesh integration
- * Implemented comprehensive monitoring solutions utilizing Grafana and Prometheus stack
- * Executed critical business implementations including Furusato Nozei tax policy modifications
- * Developed extensive test coverage with 500+ unit tests for core library functionality

• 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