



# 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

Myntra (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

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### 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