



# 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

## WORK EXPERIENCE

**Application Engineer**

Rakuten

July 2023 – Present

Crimson House, Tokyo, Japan

- **Coupon Platform Engineering:**

- \* Worked on Performance Improvements, feature Addition and Bug fixes
- \* Migrated PHP 5 to PHP 8, along with Symphony framework Upgrades
- \* Creation of New CI/CD Pipelines, Server Operations and build Triggers with Jenkins
- \* Performance improvement for Scheduled Batches and migrated them to new Infrastructure

- **Known Technologies:**

- \* Python, Java, Fast-API, Actix-web, Spring-Boot, MySQL, Docker, Jenkins, Kafka, Redis, Microsoft Azure, Amazon Web Services, Rakuten's One Cloud, Rust, C/C++, C#, PHP, MATLAB, TensorFlow, Behat

**Senior Software Engineer**

Myntra (Flipkart)

July 2019 – July 2023

Bengaluru, Karnataka

- **Platform Engineering:** Managed enterprise wide messaging platform in a team of 2

- **Topic Replication Self Serve:**

- \* Architected the entire topic replication system which spanned across multiple data centers.
- \* Introduced, Built and deployed the production ready Backend and Frontend of this self serve platform.

- **Secured Kafka System:**

- \* Architected and implemented the entire secured system, along with all SDK Updates, and also helped clients to onboard to this new system.
- \* The system also allowed incremental authorisation on topic access to authenticated clients
- \* Encryption and Decryption functionality was also introduced in SDKs along with this system.

- **MFB (Myntra's fast fashion brand) PLM System:**

- \* Implemented about 70% of this system's backend in java, spring-boot
- \* This was built in a team of 4, served as an alternative to the PRM360 system, resulting in significant cost savings for the organization.

- **KnowYourClient System:**

- \* Architected and implemented this Client metadata management + API defender system.
- \* The system provided real time access control over existing APIs, without requiring change of existing code of already running services, by acting as a defending wall

- **MFB-PLM Excel Plugin:**

- \* Single handedly built this Excel plugin in C#
- \* It prevented business people to perform an additional visit to the MFB system UI, and upload spreadsheets
- \* Simple operations like Spreadsheet consistency check, upload etc, could be performed easily using 1click

- **Observability and Monitoring:**

- \* Responsible for setting up log management for multiple services; Integration with ELK stack.

- \* Integrated email and slack alerts for metric and health monitoring system; Using statsd, influxdb, prometheus, grafana
- **Scheduler Lock:**
  - \* Implemented database-based lock to ensure that only a single schedule runs across multiple instances of the same service.
- **Containerisation:**
  - \* Worked extensively to containerise several backend 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(like online mega-sale)
- **Database Migration:**
  - \* Responsible for migrating all services within the team onto MySQL8, along with DBOps Team
- **OnBoarding New Engineers:**
  - \* Usually I'm made responsible to introduce new Engineers into the team, and supporting them until necessary.

## PROJECTS AND RESEARCH

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### Retrieving Nutritional Information of Indian Cuisines:

- Training Data Generation
- Object Localization
- Nutritional value estimation

### Robotics:

- Navigation
- Positional Awareness
- 4 Wheeled bot created using Lego NXT kits

### Academic Projects:

- Ontology: Use of SPARQL Protocol and RDF Query Language
- Simulation 5G Protocol in C++, for Beam communication
- Fashion MNIST, CNN based image classification
- Document summarization: Use of Bidirectional LSTM with attention mechanism
- SVD and Polynomial Regression: Image reconstruction using eigen vectors and Curve Fitting
- Density estimation using Gaussian Mixture Models for real and synthetic data
- Isolated and Connected digits recognition: Hidden Markov Model
- Feature extraction for handwritten digits: Dynamic Time Warping
- Kernel Density Estimation and 1 Vs All Classification: Parzen Window, Fisher discriminant based classifier, Perceptron based classifier and SVM
- Bayes Classifier: for spam email filtering, with GMail API and java

## SKILLS

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### Languages:

- English(*native-level*), Hindi(*native-level*), Japanese: *beginner (Reading Hiragana and Katakana)*

### Software:

- Corel Draw, Unreal Engine, Blender, Corel Photo Paint, Audacity, 3D Studio Max, Wireshark, Lightroom, Microsoft Office Suite, LaTeX, Markdown etc.