SHREYOSHI MAHATO

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SUMMARY

Currently pursuing Master's in Computer Science in Portland State University, Oregon, USA starting from January in Winter 2022. Previously I had 4^+ years of professional experience in Software Development with product-based companies in India. Have strong coding, data structures and algorithms, system design, and debugging skills. Worked on various projects involving concepts of OOPs, design patterns, concurrency, and parallelism, etc. Developed mostly in Java language, used various frameworks and technologies like Kafka, OAuth, Spring framework, MySql, MongoDB, Git, Redis, Micro Services, REST, etc.

WORK EXPERIENCE

Senior Software Engineer **Info Edge (India) Limited** **July, 2019 – Nov, 2021**

99acres.com (India's top real estate property site): My role involves requirement analysis, low and high-level design, coding, QA support, monitoring, knowledge sharing, and peer code review.

Previously part of another vertical of InfoEdge - Recruitment Management System of *Naukri.com* (India's largest job portal). Software enhancements, resolving client-side issues, discussion with product managers, integration with frontend teams. Revamp of existing code to new design and architecture for scalability and performance.

Software Developer **HealthKart, India** **Sep, 2017 – July, 2019**

Build APIs, maintenance of e-commerce website *healthkart.com*, developed security, optimization, real-time data analytics features, converting from monolithic to a micro-service architecture, resolving issues from both B2B and B2C platforms.

Trainee Technology (Java) **SapientRazorfish, India** **Jan,2017 – May, 2017**

Created projects as assessments after going through intense and rigorous training on enhancing coding standards and database skills by professional industry experts.

EDUCATION

Master's in Computer Science - Portland State University, Oregon, USA **3.8/4** **Jan 2022 - Present**

Bachelor of Technology – ECE, LNM IIT, India **7.8/10.0** **2013-2017**

RELEVANT COURSES

Data Structures, Algorithm Design and Analysis, Database Management Systems, Web Development, Voice Assistance, Artificial Intelligence, Internetworking Protocols, Machine Learning, Virtual Reality

PROJECTS

PSU **Voice Assistance Dialog Flow** **August 2022**

Built an agent in DialogFlow, which is a voice assistant for a birthday cake shop owner, who can schedule a new order of cake to be delivered on a given date and time. This agent makes profuse use of *contexts* to remember what has been already said to it in multiple conversation turns and saves the data by creating an event on **Google Calendar using its API**. All the CRUD operations have been implemented like creation, updation, fetching and deletion using googleapis. Similarly I have created a voice assistance using Alexa skill for searching flight details.
Web Demo Link : https://bot.dialogflow.com/f1310b52-520c-43a9-85fb-9e92342df139

InfoEdge Revamp Project: Huge Data processing

Requirement: Share with the recruiter all documents of applications in the recruitment management via Google Drive.

Problems in Existing System: The no. of documents can be large and take a long time to process. Data is prepared as zip and uploaded so all files must be created on a single server in batches synchronously. If one batch fails, the whole process needs to

start from the beginning as it was not easy to debug the issue. Zip must be password protected as sensitive information is present there. Starvation.

New System Design: Code moved to new Java Service with proper design pattern. The batches that need to be created are determined at the beginning and pushed to **Kafka**. Individual batches are processed parallel. If the number of consumer servers is increased, the time taken to complete the whole process can be reduced significantly. For failure cases, only a single batch must be processed again.

Issues faced were: Consumers stopped picking new batches or picking the same message more than once. Even if a recruiter has small data he has to wait if another process is ongoing. Staging batches picked by production retry crons.

Solutions: Hump dump and *gc* logs were analyzed. The processing time of a single batch was recorded. With the above analysis batch size, internal chunks size, consumer max pool records, and interval were decided. Separated queues for heavier and lighter data. Eventually, the revamp made the process scalable, configurable, fast, and easy to debug.

HeathKart Ecommerce projects: User Facing

Created Personalized Real-Time Widgets like Trending Now, Recently View, Best Sellers:

- User actions/clicks on the website were captured through **click stream**, then sent to **Amazon S3** for storage. Created a new java service that receives it through the SQS queue. **Kinesis** stream is used to support one publisher to multiple subscriber models so that several applications can utilize the same data at their own pace. To fast serve API requests, **Redis Cache** is used to store this dynamic data and cater to client requests.

Built User Journey for e-commerce products:

- Made an automated system at *HealthKart* for sending user email, message, and push for retail products purchase.

- Created one-click payment flow, that way a user directly lands on the payment page instead of following a longer path from product description page to cart then address, and finally to the payment page. This enhances the **user experience** by removing superfluous details which can eventually be edited on the Payments page if required. Worked on shopping carts. Optimized indexes of tables to reduce time and load on the database.

Securing public REST APIs with client-side token:

- Built an Admin dashboard (*HKSecurity*) to secure Internal APIs by applying restrictions on access with IP whitelisting, during **Hackathon** at *HealthKart*.

- Added a Security filter in all applications which use **Spring Scheduling** to fetch data every 5 mins from *HKSecurity* to validate an incoming request.

RELEVANT SKILLS AND TOOLS

Languages: Java**,** C, Python, PHP, Scala, JavaScript
Database: MySQL, Postgres, MongoDB
IDE: Intellij IDEA, Eclipse, NetBeans
AWS Services: Kinesis, S3, SQS
OS: Windows, Linux (Ubuntu)

Tools: Git, Docker, Kubernetes, Kibana, Jenkins, Maven
Cache: Redis, Memcache, Aerospike
Frameworks: Spring, Hibernate, Web Services
Search Engine: Elastic Search
Stream processing: Kafka, SQS

CERTIFICATIONS

- **Udemy**: Java Multithreading, Concurrency & Performance Optimization — Issued: August 2021
- **Udemy**: Java Design Patterns — Issued: March 2021