# SHIVAM GUPTA

### **Application Designer, Developer**

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# **EDUCATION**

#### B. Tech

**Delhi Technological University, 76.2%** 

**2011 - 2015** 

## **EXPERIENCE**

### **Application Developer**

#### **Oracle Financial Services Software Limited**

- Designed and developed Java automation framework which decreased product database upgrade time by 10X
- Lead the cloud team, while managing functional and non-functional compliance which also included creation of chef recipes,
  Linux shell scripts, WLST python scripts, Ruby Scripts, Docker images, Oracle IAM suite etc
- · Developed spring boot applications which offered remote product automation over tens of development processes
- Developed concurrent Java utilities which performed 12X times better than Oracle SQL queries on executing DML statements over Oracle database.
- Performed ETL operations on Oracle database data and stored it on mounted disks with 2X speed that of normal Java File API
- Developed java based real-time log analytics application using Apacke Kafka for data ingestion and Apache Spark for analysis and transformation
- Designed a solution architecture for our product on AWS from creation of a VPC with multiple private and public subnets to provisioning of IAM users

### Software Engineer

#### **Synerzip Softech India Private Limited**

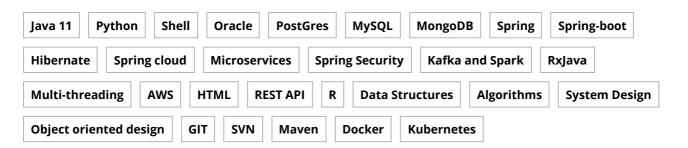
- I did an R&D project for building Spring boot based rest services for sending and receiving patient health information securely over a network and with 2X more speed than the existing solution.
- I worked alongside a team to build a Spring boot based Central Document Service, which connected across several legacy and fresh systems to fulfill HIPPA compliant document requests.

#### Lead Consultant

#### **Genpact Pvt Limited**

- Designed the application architecture which combined four different products, including JIRA, Service Now etc used by our client into one single executive dashboard
- The same application was designed using spring MVC, spring security, hibernate, swagger, H3PO and Mongo DB for handling the web application layer
- We were using Kafka connect to ingest data into our system from multiple sources and Spark streaming to transform the data
- I also helped in converting data pipelines in our existing products into Reactive Streams which improved performance by 2.5X and also made applicable more responsive and reliable through better exception handling

# SKILLS



# **ACHIEVEMENTS**



### 📅 I-Appreciate Award

Received the prestigious Oracle's employee award within a year of employment



### Ranked in 99th percentile in IITJEE

JEE-2011 Rank 5103 and AIEEE-2011 Rank 4572



### SIAM Paper Presentations

I have written applied mathematics papers and won in paper presentation competitions by Society of Industrial and Applied mathematics



#### **Toastmasters Achievements**

I have earned several awards from Toastmasters International at club, area and district levels. I have also served as the President of one of the Toastmasters Club

# **PROJECTS**

# Patch Application Framework

- Designed, developed and maintained a Java 8 based framework which automated the task of downloading and application of patches on the product server. It helped save tens of hours of manual effort per application update per developer
- The project was built upon SOLID principles, utilizing design patterns and effective Java programming methodologies.
- Design involved developing a XML based general programmable language for the framework.
- The whole utility was later exposed as a Spring-boot application to enable multiple developers remotely upgrading several environments simultaneously!

#### **ORMB Cloud Service**

- Working as the team lead, I worked to improve the automation scope and create the missing non-functional requirement
- We did containerized deployment on docker and was orchestrated using Kubernetes
- · Coded tens of chef recipes, java utilities and Linux shell scripts to perform specific configurations and security updates
- · Created an AWS VPC with Subnets, Routetables, and NAT gateways to host our containerized applicator

# Information Lifecycle Management

- It composed of two lava utilities, one of exported and transformed huge database tables into mounted disks and the other one performed multiple DML statements on tables with millions of entries
- Achieved 2.5X percent faster speed than the existing solution using Java NIO and performance knowledge
- The second utility was a Spring-boot application which could execute large INSERT and UPDATE operations on a remote database, in most cases 10X faster than simple Oracle query using multi-threading and chunking logic

# **PROJECTS**

# Streaming solution for real-time collection and analytics

- We implemented a Springboot websocket client to consume several customer data streams and act as a collection tier
- We implemented Kafka to act as a storage and message queue system in between the collection tier and our analysis tier
- The analysis tier was composed of Spark, utilizing MLib and GraphX while the data was finally persisted in MongoDb

#### Central Document Service

I was part of the team which designed high performance, Spring boot web application in a 100% agile and test driven environment

- The central document service is a single endpoint for getting patient documents which reside on different networks and have different business rules and compliances required for their processing.
- The technologies used were Java 11 based, Springboot, Spring AOP, Spring Security, Consul, SOAP/REST/POX, Swagger, JAXB etc.
- I designed and implemented several key components of the web application, including connection to legacy web services and consuming their data intro the application with central exception handling and exhaustive Mockito and Junit based test cases
- I designed and developed rest services which could upload and download several documents, while also having caching and compression features in built

### Refactoring Projects for performance

- Converted computations which involved extrinsic loops into Java streams
- · Converted several event based logic into reactive streams with capability of back-pressure
- · Implemented temporary caches in Java with more than 80 percent hit ratio in user testing to improve performance

### Core Java, Data Structures, Algorithms and Spring training

- I am lead facilitator of up-skilling our senior developers and fresh recruits in the advancement of Java platform in recent years
- We covered all the advancements in Java language from version 7 to version 8, e,g. lambda, streams, concurrency packages etc
- I am also responsible for teaching basic implementations of common data structures and solving several algorithmic problems based on those data structures

# Aggregated Analytics Framework

- Designed the application architecture for the spring-boot based application which involved ingesting data using kafka streams and then processing using Spark Streaming and persisting it into a MongoDB
- I implemented several micro-services and also Eureka naming server, Zuul API gateway, Spring cloud configuration servera and also Zipkin and RabbitMQ based distributed tracing of requests
- We also used RxJava and its multitude of operators for some event-based stream computations which required minimum latency