 Shishir Sarkar

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**GITHUB:** **https://github.com/shishir11**

**SUMMARY**

* **Certified** developer having 12+ years of proven experience to build **Enterprise Systems** using **Java, J2EE, Scala, Big Data (5 years), AWS (4 years), React-JS (1 years)** technologies and applied **best Practices (GOF design pattern, j2ee design patterns), OOPs, SOLID principal and standards** as suggested in **software engineering practices.**
* Processing string expertise for **software development project lifecycle** starting from customer requirements **gathering, analysis, design, development,** and **automation testing till implementation** using **Java/J2ee** technology.
* Having good exposure to proven software development methodologies/processes using **Agile SCRUM, Iterative & waterfall Mode.**
* Proven experience in **architectural** knowledge of design and development of Service Oriented Architecture, Micro service-based architecture**, Bigdata architecture, SAAS, SOAP based architecture, Cloud** Architecture **and Enterprise Integration architecture using GoF design pattern**, J2EE design pattern and SOLID principal.
* Worked on market leading database server like **ORACLE, DB2, POSTGRES, MYSQL**.
* Strong experience of developing application on Test Driven Development (**TDD**) approach using **JUNIT**, **JMOCK and EASYMOCK.**
* Proven experience for ability to do **JVM Performance Monitoring, tuning, optimization, trace memory and thread leakage, memory management and JVM command tool** and writing the **low-level latency** and high **throughput and resilient code.**
* Worked on writing effective **reporting doc** skill like **Job metrics,** Requirement, Design, Change Request, Method of Process, and Release for software development, testing and implementation, **Development estimate (WBS), Design Doc, MOP, Release** report
* Good exposure to work with the **US and UK** client, communicate through **daily stand-up scrum** meeting understand the story or requirement and **convince** the **business logic** to client and different team member and participating in development retrospectives to identify areas of improvement Demonstrating software functionality.
* Decade of experience to roll out successful project in **BFSI, Telecom and Mobility domain**.
* Contribute the current company using developed a **Proof of concept** in **java** for their **pre-sales** activity which they are getting two good new contact through which they get high revenue.
* Good commands on applying the Computer Science fundamentals, **data structures and algorithms while designing the solution.**

**Certification:**

* OCJP 7

**TECHNOLOGY**

|  |  |
| --- | --- |
| **Language:**  | **Java1.8, Scala 2.11, Python, Java Script, Typescript, RxJava** |
| **Data Structure**  | Stack**,** Queue**,** Linked List |
| **Algorithms** | **Sorting, searching, BST, Divide and conquer**  |
| **Java-Stack** | SERVLET**,** JSP**,** **Multithreading,** **Concurrent API ,** NIO, Java Stream, RMI, Sockets, Concurrent, Hotspot JVM, JRocket, JDK8 Functional programing |
| **Big Data** | **Spark, Map Reduce, hive, Sqoop, Oozie, Apache Beam, Apache Flink**  |
| **Cloud Technology** | **Amazon- AWS (S3, EC2, Dynamo-DB, lambda)**  |
| **ORM** | Spring- JPA, **Hibernate** 4.0  |
| **No-SQL** | Elastic Search, Cassandra, Mongo DB |
| **UI & supporting language and technologies** | **Node.js, React-JS, JSX, Angular-JS 2**, **Struts** (1.2.9, 2.0), **JSF**, VAADIN, **Sprint MVC, XML, XSLT, JSON, Ajax** |
| **Spring 4**  | Spring Core, AOP, DI, **Batch**, Security OAUTH, **Boot,** **Rest** , Spring Scheduler, **Cloud, spring web-socket** |
| **Web-Service** | **JAX-RS, JAX-WS**, Spring **REST**, Apache AXIS 2 |
| **Messaging -Services** | Kafka, Rabbit MQ, **JMS, Esper Complex Event processing** |
| **Connection Polling**  | C3P0, DBCP, Tomcat JDBC Connection Pool, IBM Web Sphere Connection Pool |
| **RDBMS** | db2, Oracle (RDBMS, Coherence), PostgreSQL, MySQL |
| **Cache-Server** | **Redis, EhCache,** OSCache |
| **Testing** | **JUNIT**, MOCKITO, POWERMOCK, **Selenium**, SOAPUI, Postman, Grizzly |
| **Dev-Ops** | Jenkins, Bamboo |
| **Build tools** | **Maven** |
| **Web & Application Server** | **Tomcat (6.0), IBM WebSphere, JBoss-web server** |
| **Repository** | **GIT, SVN** |
| **Technologies** | Spring Scheduler, **Terracotta Quartz Scheduler,** RabbitMQ messaging services, **DOM, SAX, ELK** |
| **Design Pattern** | GOF, J2ee Design pattern, EIA,  |

**PROFESSIONAL EXPERIENCE**

**Sept/2019 to till now Core Compete Pvt Ltd**

Core Compete Pvt Ltd is predominantly working on Cloud Analytics platform. Core compete developed their own product which specifically use to monitor the analytics workload in cloud platform.

**Designation: Principal Software Architect Product Name:** Credit Decision Processing System

**Client:** HSBC Bank **Business Domain:** BFSI

**Language: Java 1.8, Scala 2.11, Python 3.7, React JS Cloud Environment: GCP**

**Technologies:** Spring security, Spring boot, Spring JPA, ELK, Postgres**,** AWS (SMR, EC2, S3, RDS), Spark core, Spark Data-Frame, JMC, Junit, Mockito, Kafka, GCP, Docker, Kubernetes, Jenkins, SonarQube, React-JS, JSX, node-JS

**Design pattern:** Non-blocking asynchronous microservice, Real time microservice, ETL based pipeline,

**Project Description**: Decision Processing Service (DPS) is an integrated suite of products that supports credit decisions across the lending lifecycle which includes but is not limited to marketing and underwriting new accounts, checking regulatory rules to ensure compliance, servicing existing customer requests, and generating offers to existing customers that increase the profitability of the portfolio. This solution processes credit requests for PFS (Personal Financial Services) and CMB (Commercial Banking) products.

**Responsibilities:**

* Creating required high-level product specification and design doc which also encapsulate HLD, LLD and developed the MVP, based on the design specification and back to back discussion with different stack holder.
* Identified the key technology stack based on research, cost, performance, and reliability.
* Identifying the hardware and software infrastructure and needs to accommodate the company architectural goals.
* Design and developed non-blocking async microservice, event driven (WebSocket) microservice based architecture.
* Designed and developed the UI to check, compare, validate, approve, migrate, and monitor the ETL Job.
* Design and developed some vital UI component using ReactJS, JSX, AG Grid and Node JS.
* Design and deployed the ELK stack on various instance of the running microservice in the AWS and GCP cloud.
* Designed and developed the big data architecture to manage the ETL pipeline (validation -> data cleansing -> data curing -> data transformation -> data standardization -> data loading) to run the credit job using spark and Scala.
* Design the Jenkins pipeline to build the docker image and deployed the docker image in Kubernetes in GCP Cloud and pipeline, which contribute to enhance the DevOps practices.
* Design and developed the messaging infrastructure using Kafka and zookeeper.
* Re-Architecture the audit pipeline using python and elastic search.
* Implement the encryption approach to secure the env details use by micro-services.
* Design and developed the inhouse common library platform for elastic search DAO, AWS S3, SAML auth and authorization-based operation.
* Played active role to fix the sonar (static code analyzer), nexusIQ (dependency flaws) and checkmarks (security flaws) issue.
* Developed Proof of Concept (POC) for Center of Excellence (COE) on emerging technologies and for client proposals

**Jan/2017 to July/2019 Tavant Technologies**

Tavant specializes in building solutions and providing end-to-end services in the domain of Service Operations, Consumer Lending, Financial Services, eBusiness, eMedia, Interactive Entertainment and Trading & Securities. Tavant core expertise lies in Business Process Automation and Web Technology-based complex application development.

**Designation:** Technical Architect **Product Name:** GVAP R8

**Client:** Experian Business Domain: BFSI

**URL:** [**http://www.experian.com/consumer-information/analytical-sandbox.html**](http://www.experian.com/consumer-information/analytical-sandbox.html)

**Language: Java 1.8, Scala 2.11, Python 3.7.0, Environment: AWS**

**Technologies:** Hadoop CDH 5.0.6, AWS (EC2, S3), Spark (2.2) Streaming, Spark SQL (Data Frame, Dataset), Spark core, Amazon AWS (S3, dynamo-DB), Kafka, Hive, JVMProfiler, SOAP based services, spring (IOC, boot, Transaction manager), Junit, Mockito, **Concurrent API, node\_JS**

**Description**: Experian credit score calculation application is built on Cloudera big data and Amazon AWS cloud platform which offers suite of products to Experian’s customers (e.g.: Credit Report, Market Prospecting, Account Review, Trend View, Campaign etc.). This product based on B2B model.

* Worked as a Technical Architect and developer for Experian Financial Credit Rating Services based out in US and UK market and identified technology stack (Java, Scala, Python, Hadoop, and Cloud Technology) to develop the B2B system.
* Plays a signification role with the team of Architect to designed workflow and architecture of credit score calculation using Java, Scala, Python, Bigdata and Cloud technology.
* Design and develop the workflow of data ingestion process for Amazon S3, Hive, Sqoop and Oozie.
* **Bank of America branch in Latin America branch introduced the new system to generate the transaction information in xml file format, I analyze, coded, tested and deploy the new ingestion system which has couple of modules preprocessing and validation to flatten the xml data and validate the information.**
* **After validation the business requires, that system has an ability to check the validation error and able to takes the decision, whether we accept the input transaction xml file or reject it, I analyzed this requirement, coded the requirement, tested and deploy it on dev and UAT cluster environment using Jenkins CICD automation pipeline.**
* **As per new requirement comes from the business to perform curing process which conduct the data calibration, I analyzed this requirement, coded the requirement, tested and deploy it on dev and UAT cluster environment using Jenkins CICD automation pipeline.**
* **As per new requirement comes from the business to perform the pinning process on data which eventually enhancement and clean the data by checking historical record. I analyzed this requirement, coded the requirement, tested and deploy it on dev and UAT cluster environment using Jenkins CICD automation pipeline.**
* **As per new requirement comes from the business to perform the state calculation process on data which eventually perform the logical and state operation on data. I analyzed this requirement, coded the requirement, tested and deploy it on dev and UAT cluster environment using Jenkins CICD automation pipeline using Jenkins CICD automation pipeline.**
* **As per new requirement comes from the business to perform the preprocessing and postprocessing operation on data which is required to make compatible to send input for credit score calculation. I analyzed this requirement, coded the requirement, tested and deploy it on dev and UAT cluster environment using Jenkins CICD automation pipeline.**
* **As per new requirement comes from the business to perform the aggregation operation which consider as a request input from UI, eventually consider as an input criterion to trigger the credit score calculation operation. I analyzed this requirement, coded the requirement, tested and deploy it on dev and UAT cluster environment using Jenkins CICD automation pipeline.**
* **As per new requirement comes from the business to perform the composition operation which consider as a request input from UI, eventually consider as an input criterion to trigger the credit score calculation operation. I analyzed this requirement, coded the requirement, tested and deploy it on dev and UAT cluster environment using Jenkins CICD automation pipeline.**
* **Played critical role to develop the Selection Process used for reducing a set of incoming bureau records based upon defined criteria using Spark Data Frame.**
* **Implement process improvements (Automation, Performance tuning, Optimize workflows).**
* **Play a significant role to develop the GVAP (UI) which perform Extract, Transform, and Load (ETL) job to pull information from the source online bureau database and loads it into the GVAP data warehouse.**

**Designation:** Technical Architect and Lead Big Data Developer

**Product Name:** Fin-Connect

**URL:** <https://www.tavantvelox.com/product.html>

**Environment: AWS**

**Language: Java, Scala, ReactJS, Typescript, Java-Script**

**Technologies:** JDK1.8, spring boot based micro-services, Spring JPA Repository, Oath with JWT, **Angular-JS 2,** Hadoop CDH, React-JS, 5.0.6, Spark 2.2, Mongo-DB, AWS (EC2, S3), spring messaging services**, micro-service architecture.**

**Description**: This product specifically targets the mortgage domain customer such as Financial Institution, Investment bank and third-party customer and provide superior level of interaction and mortgage processing between customer and investor.

* Responsible to analyze the business requirement to implement Mortgage product for banking system.
* Responsible to analyze all the business use case and work effectively with Business Architect for mortgage domain.
* Developed high level design diagram and component level design diagram to address the complete ecosystem.
* Design various class level design diagram and sequential diagram for developing skeleton of product.
* Develop different library (AWS-S3, Authentication and Authorization, packaging library) to use across the product line.
* Design and develop the messaging infrastructure using Apache Camel using Enterprise Integration Architecture
* Work with team to design the cloud infrastructure for proxy, loan balancer using spring cloud for deploying micro services architecture as a spring boot application.
* Develop core business functionality of this product.
* Design the lending page in UI and coordinating with UI architect.
* Design and developed some vital UI component using ReactJS & JSX
* Developed the mock test case for core functionality using TDD design pattern.
* Working performance and scalability part.
* Developed the CICD pipeline to automate the Dev-OPS work.

**01/June/2015 to 13/Jan/2017 ITC Infotech LTD**ITC InfoTech, a global IT services company, is a fully owned subsidiary of ITC Limited, the US$ 8 billion diversified conglomerate. ITC Limited is rated among the ‘World's Most Reputable Companies’ by Forbes magazine and among ‘India's Most Valuable Companies’ by Business today.

**Designation**: Technical Lead **Project Name**: ZeaS ETL tool

**Client:** Santander bank UK

**Environment:** Scala, JDK1.8, spring (Boot, Rest, IOC, AOP, security, token), **Git**, JIRA, BAMBOO, MySQL, Cassandra, **Spark, Sqoop, Hive, Oozie,** RIAK, JUNIT, MOCKITO, POWERMOCK

**Description:**

Basically, this is ETL product which is developed and customized for Santander bank. The concept of this tool is performing ingestion process on their credit business data.

**Accomplishments:**

* Design the architecture & developed the workflow of RDBMS based ingestion process.
* Design the architecture & developed the workflow of file-based ingestion process.
* Design the architecture & developed the oozie based scheduler job for extract & transform the information for day to day transactional record.
* Developed **Spark based oozie** job student performance JSON data and uploads it to Amazon S3 bucket.
* Developed **Spark based oozie job** extracts the learning activity accessed data and discussion data from decomposed tables and puts it into HBase.
* Developed **Spark based oozie** job decompose the required data learning activity accessed and discussion messages from UI-client log and populates it to respective tables.
* Developed **Spark based oozie job** pulls the seocs data from CONODS and runs the aggregation on those data and the results are populated to HBase.
* Designed and implemented **swagger maven plug-in** generates JSON API documents during a maven build.
* Implemented **SSO** services using **spring and token authentication**.
* Implementation **memcached** for distributed caching strategy on server side.
* Developed critical **micro-services** like **instrumentation, roaster, proxy and SSO services.**
* Played key role to implement multitenant functionality in existing micro services.

**01/11/2014 to 30/05/2015 Sri Prathinik Consulting**

**Project Name: BlackBerry**

**URL:** <http://global.blackberry.com/en/apps>, https://appworld.blackberry.com/webstore

**Environment:** Jdk1.8, Java Enterprise Edition, Jersey, Spring (Rest, MVC, IOC, AOP, security, Batch, Scheduler), Amazon AWS Server, S3, SVN (Perforce P4), oracle, JUNIT, MOCKITO, POWERMOCK, Solr, Kafka, Zookeeper, Hadoop, **Mule ESB**.

**Design Pattern:** Proxy, Circuit Breaker, Façade, chain of responsibility, proxy, Singleton, Micro-Services Architecture, Machine Learning

**Description:** We handled a project of cloud-based architecture micro services-based architecture developed in JAVA, the team size is 15 where the budget of this project was 1, 50,000.00$. Developed new feature of existing service which boosts the popularity of this Blackberry service in Global market and company got the good growth in term of revenue as well. My main responsibility is to work with architecture Team apart from architecture is Java Garbage collection tuning, Java memory monitoring tools, Java garbage collection tuning, Monitoring of Java production server. Multiple live data centers have been architected to ensure maximum uptime of the cloud applications and to create a fault tolerant, highly available, and redundant system.

**Accomplishments:**

* Design & Developed Publish Subscribe services.
* Design & Developed Search Services using Apache Solr and Cassandra.
* Design & Developed Services:
* Design & Developed lead mgmt. /approval process.
* Email notification & templates engine:
* Implementation **ETAG (Entity Tag)** caching strategy on client side.
* Designed **architecture** and implemented **API Explorer (web application)** for visualizing Rest Services using swagger API.

**21/November/2013 to 21/October/2014 Global Logic Company**

Global Logic Inc. an offshore software development R&D services company.

**Designation: Senior Java Developer:**

Project Description: We handled a project of Spring Nextel (Group Calling services) name is Push to Talk developed in **JAVA**, the team size is 10 where the budget of this project was 1, 50,000$. Developed new feature of existing service which boost the popularity of this service in US market and company got the good growth in term of revenue as well.

**Project Name:** Sprint Push to Talk

**URL:**http://shop.sprint.com/mysprint/services\_solutions/category.jsp?catId=service\_sdc&catName=Sprint%20Direct%20Connect

**Environment:** Java Enterprise Edition, Servlet-Filter, Spring (IOC, AOP, Batch), IBM XDMS framework, SNMP Agent, XQuery, LDAP Query, EMS, NMS, IBM DB2, IBM Web Sphere Server, **JAXRS, JAXWS**, Web Method, SVN, JIRA, BAMBOO, HTML 5, LDAP, JSF,ICE-Faces, SOAP-UI, JUNIT, MOCKITO, POWERMOCK,XML and XSD Processing, EhCache, SVN, Grizzly.

**Design Pattern:** Factory, Façade, chain of responsibility, proxy, Factory, Singleton, Observers, SOA Architecture

**Accomplishments:**

* Develop the SOAP based API to interact with NSN(Nokia Siemens Services) components to use to validate and authenticate the QCHATID assign to each Sprint PTT customer.
* Implement new multithread-based component using concurrent API to handle every request in separate thread.
* Worked on performance improvement part to vertical scale the application on code level, dao level and JVM level.
* Modified the major component which is a business intelligence part of existing application.
* Developed, tested, and implements APNS API as major CR release to support the iOS8 with existing architecture using jdk8.

**26/July/2012 to 15/November/2013 Persistent System Limited**

**Designation: Senior Java Developer**

**Project Name:** CalcEngine

**URL:** http://www.advisory.com/international

**Project Description**: Developed a CalcEngine project for Advisory Board Company. Advisory Managing Team facing a problem of delay calculation of their client requested bills because of volume of bills calculation requested submitted daily, earlier they are having a legacy system which took a long time. This project is in Pricing and Finance domain.

**Environment:** JRocket1.6, Java Enterprise Edition, Servlet, Spring Core, AOP, Spring AOP, Spring Integration, JPA Eclipse Link, PostgreSQL, Oracle RDBMS, Oracle Coherence, GIT, RabbitMQ Messaging server, Junit, Mockito, Power mock, JMS, JSON, TDD, Mockito, BDD, Continues Integration, Ehcache, AngularJS, JAX-RS and SOAP based Services, Low latency and high throughput programming.

**Design Pattern: EIA,** Factory, Façade, chain of responsibility, proxy, Singleton, Distributed Architecture

**Selected Accomplishments:**

* Advisory board client facing a problem to calculate all their client bill because in legacy system, its took the whole night to calculate the bills because of volume of record, they are looking for solution which can work as distributed fashion and will calculate the bills within hours so that and if load will increase than no of thread worker will also increase.
* worked with team to build the solution based on ENTERPRISE INTEGRATION ARCHITECTURE pattern which implementing messaging framework (SPRING INTEGRATION), spring hibernate support, IOC, PostgreSQL. We developed, tested and implemented the solution. After implemented new system the revenue growth raised to 1 million$.
* Implement in-memory data for storing intermediate result and develop the middleware application to support the connectivity within memory DB to other components.
* Develop the signification functional user story, which has high impact on functionality level using GoF design pattern
* Develop the maximum Junit test cases and reach to 85% code coverage, which I received as a appreciation from the client.
* Optimize the database query in the DAO layer to achieve the significant level of performance.
* Design and develop the rule engine using drool framework.
* Developed the multithreading and concurrent API based search engine to scrape the data from the internet and social network based on business id.
* Develop the rule engine to cater the business use case information from search data and transform to relation schema-based data.
* Reengineered the existing third-party module using JDK 7 latest technology
* Implements spring security for authentication and authorization.
* Performed the responsibility of Linux server management in the Azure for all the deployment and maintenance.

**Note: 26/July/2008 to 11/January/2013, working as a contractor in Persistent from the vendors Gloubussoft Pvt Ltd.**

**EDUCATION:**

10th 2000

12th 2002

2002 - 2005 BSc (Computer Science, Math, Physics) from GGU Central University in India.

2005 – 2008 MCA

**ACHIEVEMENT:**

* Published paper in **INTERNATIONAL JOURANAL** on article “**Cluster Performance Calculator for High-Performance Distributed Web Crawler**”, Under paper **ID#: IJETCAS 14-345**
* Published paper in **INTERNATIONAL JOURANAL** on article “**MONITORING & FEEDBACK ANALYSIS FRAMEWORK FOR A HIGH-PERFORMANCE DISTRIBUTED WEB CRAWLER”,** Under **Pezzottaite** Journals**,**
* **My Bigdata technology blogs have been published in the famous organization portal called as KnowledgeHut. Below is the link**
	+ **https://www.knowledgehut.com/interview-questions/spark**
	+ **https://www.knowledgehut.com/interview-questions/kafka**