Shishir Sarkar

ORACLE Certified Associate Java SE 7 Programmer

*Versatile, high-energy technocrat with the merit of executing prestigious Information Technology projects of large magnitude within strict time schedules, targeting **senior level assignments** in **Software Development, Technical and Solution Architecture** with an organisation of high repute*

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PROFILE SUMMARY

- **Strategic Leader** offering **nearly 13 years** of **experience** in building **Enterprise Systems** using **Java, J2EE, Scala, Big Data, AWS, React-JS Technologies** and applying **Best Practices (GOF Design Patterns, j2ee Design Patterns), OOPs, Principal and Standards** as suggested in **software engineering practices**
- Developed **software solutions** by conferring with **users**, studying **systems flow**, **data usage** and **work processes**
- Proficient in **Software Development Life Cycle** from **requirement analysis** to **system study**, **designing, coding, development**, **debugging, documentation** and **implementation**
- **Customer-centric professional** with **excellence** in driving overall **solutioning** based on **customer's business** and **technical requirements**
- Expert in writing **Reporting Doc Skill** like **Job Metrics, Requirement, Design, Change Request, Method of Process, and Release for Software Development, Testing**, **Development Estimate (WBS), Design Doc, Mop** and **Release Report**
- Followed **project life cycle methodology** defined under **process framework**; ensured that **customer deadlines** were met
- **Architected** and **designed solutions** for **product**, managed **process set-up** & **development** and drove **product vision**, **strategy, roadmap** and **release plans**
- Experienced in **evaluating technology alternatives**, **selecting technology**, and **developing recommendations** for **system solutions** that ensure **appropriate integration** with the **technical architecture**
- Created **solutions** for **technical specifications**, installed **software** and deployed **customizations**
- Comprehensive experience in **designing procedures** for **change** in **project operations** to **design technical solutions**, ensuring **business functionality adherence** and enhancing **competitive advantage**
- Established an **architect function** to ensure **ample focus** on **on-going activities** and **quality improvements** on an **architectural level** in the **existing code base**
- **Key People Leader**, who has successfully **led and motivated team** towards **growth & success** in the **organization**; created a **clear view of future through coaching and execution**

KNOWLEDGE PURVIEW

- Extensive exposure in:
  - **Software development methodologies/ processes** using **Agile Scrum, Iterative & Waterfall Mode**
  - **Architectural knowledge** of **design & development** of **Service Oriented Architecture, Microservice-Based and Big Data Architecture, SAAS, SOAP Based Architecture, Cloud Architecture** and **Enterprise Integration Architecture** using **GOF Design Pattern** and **J2ee Design Pattern**
  - **Market leading database servers** like **Oracle, DB2, Postgres and MySQL**
  - Development of **application** on **Test Driven Development (TDD) approach** using **Junit, Jmock and Easymock**
  - **Monitoring**, **tuning**, **optimization**, **trace memory**, **thread leakage, memory management**, **JVM command tool**, **writing of low-level latency**, **high throughput** and **resilient code**
- Gained **international exposure** by working with **US & UK client**, communicating through **daily stand-up Scrum meeting** analysing the **story** and convincing **business logic** to **client/ different team member** and participating in **development retrospectives** to identify **areas** of **improvement**
- Experience of **successfully** performing **project** in **BFSI, Telecom and Mobility Domain**
- Acted as a **key member** in the **current company** by using **proof of concept in Java** for their **pre-sales activity**

PUBLICATIONS

- Published paper in **International Journal** on:
  - "**Cluster Performance Calculator** for **High-Performance Distributed Web Crawler**", under paper **ID#: IJETCAS 14-345**
  - "**Monitoring & Feedback Analysis Framework for a High-Performance Distributed Web Crawler**", under pezzottaite journals
- **Big Data Technology blogs published** in the **famous organization portal** called as **KnowledgeHut**

CORE COMPETENCIES

- ***Software Development***
- ***Solution/ Technical Architecture***
- ***Strategy Development***
- ***Project Management***
- ***Testing***
- ***Continuous Process Improvement***
- ***Design and Development***
- ***Quality Assurance***
- ***Team Building & Leadership***

WORK EXPERIENCE

Sep'19 to Present with Core Compete Pvt. Ltd. as Principal Software Architect

Product Name: Credit Decision Processing System/ **Client:** HSBC
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

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

Roles:
- Developing required **high-level product specification** & **design doc** which also encapsulates **HLD, LLD** and creating **MVP**, based on **design specification** and **back-to-back discussion** with **different stakeholder**
- Analysing **key technology stack** based on **research, cost, reliability** and identifying **hardware/ software infrastructure**
- Designing and developing:
  - **Non-Blocking Async Microservice**, **Event Driven** (WebSocket) **Microservice** based **architecture**
  - **UI** to **check, compare, validate, approve, migrate** and **monitor** the **ETL Job**
  - **Vital UI component** using **ReactJS, JSX, AG Grid and Node JS**
  - **ELK stack** on various instance of the running **Microservice** in the **AWS** and **GCP cloud**
  - **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**
  - **In-house common library platform** for **Elastic Search DAO, AWS S3, SAML Auth** and **authorization-based operation**
  - **Messaging infrastructure** using **Kafka** and **Zookeeper**
  - **Jenkins pipeline** to build **Docker image** and deploying **Docker image** in **Kubernetes** in **GCP Cloud** and **pipeline**, which contribute to enhance the **DevOps practices**
- Performing **re-architecture** of the **audit pipeline** using **python** and **elastic search** and implementing **encryption approach** to secure the **ENV details** used by **micro-services**
- Creating **Proof of Concept (POC) for Center of Excellence (COE)** on emerging **technologies** and for **client proposals**
- Contributing in **fixing** the **sonar** (static code analyser), **NexusIQ** (dependency flaws) and **Checkmarks** (security flaws) **issue**

Jan'17 to Jul'19 with Tavant Technologies as Technical Architect

Product Name: GVAP R8/ **Client**: Experian
URL: http://www.experian.com/consumer-information/analytical-sandbox.html
Business Domain: BFSI
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, NodeJS

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). This product is based on B2B model

Roles:
- Contributed as **Technical Architect/ Developer** for **Experian Financial Credit Rating Services** based in **US** and **UK market**
- Acted as **key player** with the **team** of **Architect** to design **workflow** and **architecture** of **credit score calculation** using **Java, Scala, Python, Big Data** and **Cloud technology**
- Designed and developed **system** to:
  - **Check validation error**, take **decision**, coded the **requirement**, **tested** & **deployed** it on **dev** & **UAT cluster environment** using **Jenkins CICD and Automation Pipeline**
  - Perform **curing process** which conducted the **data calibration**, coded the **requirement**, **tested** & **deployed** it on **dev** and **UAT cluster environment** using **Jenkins CICD and Automation Pipeline**
- Designed and developed:
  - Workflow of **data ingestion process** for **Amazon S3, Hive, Sqoop and Oozie**
  - **System** that has the **ability** to check the **validation error** and was able to takes the **decision**, **coded** the **requirement**, **tested** and **deployed** it on **dev** and **UAT cluster environment** using **Jenkins CICD automation pipeline**
  - System to perform **curing process** which conduct the **data calibration,** coded the **requirement**, tested and deploy it on **dev** and **UAT cluster environment** using **Jenkins CICD automation pipeline**
  - System to perform **pinning process** on data which eventually enhanced and cleaned **data** by checking **historical record**

- Analyzed, designed, coded and deployed:
  - **New ingestion system** which has couple of **modules pre-processing** and **validation** to **flatten** the **xml data** and validate the **information**
  - System to perform **state calculation process** on **data** which eventually perform the **logical** and **state operation** on **data**
  - System to perform the **pre-processing** and **post-processing operation** on **data** which was required to make **compatible** to send **input** for **credit score calculation**
  - System to perform **aggregation operation** which was considered as a **request input** from **UI**, eventually considered as an **input criterion** to **trigger** the **credit score calculation operation**
  - System to perform **composition operation** which was considered as a **request input** from **UI**, eventually considered as an **input criterion** to **trigger** the **credit score calculation operation**
  - System to perform **Selection Process** used for **reducing** a set of **incoming bureau records** based upon **defined criteria** using **Spark Data Frame**
- Implemented **process improvements (Automation, Performance tuning, Optimize workflows)**
- Acted as **key player** in developing **GVAP (UI)** which performed **Extract, Transform, and Load (ETL) job** to pull **information** from the **source online bureau database** and **added** it into the **GVAP data warehouse**
- Successfully set-up **dev** and **UAT cluster environment** using **Jenkins CICD automation pipeline** using **Jenkins CICD automation pipeline**

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, JavaScript

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 customers such as Financial Institution, Investment Bank and third-party customer and provides superior level of interaction and mortgage processing between customer and investor.

Roles:
- Analysed **business requirement** to implement **mortgage product** for **banking system,** identified all **business use cases** and performed effectively with **Business Architect** for **Mortgage domain**
- Developed **high level design diagram**, **component level design diagram** to address **complete ecosystem** and created different **library (AWS-S3, Authentication and Authorization, packaging library)** to use across the **product line**
- Designed and developed the **messaging infrastructure** using **Apache Camel** using **Enterprise Integration Architecture**

Jun'15 to Jan'17 with ITC Infotech Ltd. as 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.

Roles:
- Designed:
  - **Architecture** and developed the **workflow** of **RDBMS** based **ingestion process**
  - **Architecture** and developed the **workflow** of **file-based ingestion process**
  - **Architecture**, developed **Oozie** based **scheduler job** for **extract** and transform **information** for **transactional record**
- Developed:
  - **Spark** based **Oozie job student performance JSON data** and uploaded it to **Amazon S3 bucket**
  - **Spark** based **Oozie job extracts** the **learning activity accessed data** and **discussion data** from **decomposed tables** and added it into **HBase**
  - **Spark** based **Oozie job**, decompose required **data learning activity** accessed and **discussion messages** from **UI-client log** and populates it to **respective tables**
  - **Spark** based **Oozie,** job pulled **data** from **CONODS**, ran **aggregation** on **data** and **results** are **populated** to **Hbase**
  - **Critical micro-services** like **instrumentation, roaster, proxy** and **SSO services**
- Implemented:
  - **Swagger Maven plug-in**, generated **JSON API documents** during a **Maven build**
  - **SSO services** using **Spring** and **Token authentication**
  - **Memcached** for **distributed caching strategy** on **server side**
- Designed and implemented **swagger maven plug-in** that generated **JSON API documents** during **maven build** and executed **SSO services** using **spring** and **token authentication**
- Steered the **Implementation of Memcached** for **distributed caching strategy** on **server side** and developed **critical micro-services** like **instrumentation, roaster, proxy** and **SSO services**
- Contributed as **key player** in implementing **multitenant functionality** in **existing micro services**

Nov'14 to May'15 with 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, Proxy, Singleton, Micro-Services Architecture, Machine Learning

Description:
Managed project of Cloud-based architecture Microservices-based architecture developed in Java, the team size was 15 where the budget of this project was 1, 50,000.00$. Developed new feature of existing service which boosted the popularity of this Blackberry service in Global market and company got the growth in terms of revenue as well. Main responsibility was 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.

Roles:
- Designed & developed:
  - **Publish Subscribe Services** and **Search Services** using **Apache Solr** & **Cassandra**
  - **Services** and **Lead Mgmt./ Approval Process**
- Administered **email notification, templates engine** and steered **implementation of ETAG (Entity Tag) Caching Strategy** on **client side**
- Designed **architecture** and implemented **API Explorer (web application)** for visualizing **Rest Services** using **Swagger API**
- Collaborated with **team** to **design** the **cloud infrastructure** for **proxy**, **loan balancer** using **spring cloud** for deploying **micro services architecture** as **spring boot application**

Nov'13 to Oct'14 with Global Logic Company as Senior Java Developer

Project Name: Sprint Push to Talk
Environment: Java Enterprise Edition, Servlet-Filter, Spring (IOC, AOP, Batch), IBM XDMS Framework, SNMP Agent, XQuery, LDAP Query, EMS, NMS, IBM DB2, IBM WebSphere 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

Description:
Managed project of Spring Nextel (Group Calling services) name is Push to Talk developed in Java, the team size was 10 where the budget of this project was 1, 50,000$. Developed new feature of existing service which boosted the popularity of this service in US market and company got the growth in terms of revenue as well.

Roles:
- Developed **SOAP** based **API** to coordinate with **NSN (Nokia Siemens Services) components** that was used to **validate** and authenticate the **QCHATID** assigned to each **Sprint PTT customer**
- Executed **new multithread**-based **component** using **concurrent API** to manage **every request** in separate **thread** and functioned on **performance improvement** part to vertical **scale** the **application** on **code level, Dao level** and **JVM level**
- Modified **components** which were part of **business intelligence** of **existing application;** developed, tested & implemented **APNS API** as major **CR release** to support the **iOS8** with **existing architecture** using **jdk8**

Jul'12 to Nov'13 with Persistent System Limited as Senior Java Developer

Project Name: CalcEngine
URL: http://www.advisory.com/international

Description:
Developed a CalcEngine project for Advisory Board Company. Advisory Managing Team was facing a problem of delay calculation of their client requested bills because of volume of bills calculation requested submitted daily, earlier they were 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, Powermock, JMS, JSON, TDD, Mockito, BDD, Continuous 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

Roles:
- Coordinated with the **team** to build **solution** based on **Enterprise Integration Architecture pattern** which implemented **Messaging Framework (Spring Integration), Spring Hibernate Support, IOC** and **PostgreSQL**
- Executed **in-memory data** for storing **intermediate result** and developed **middleware application** to support **connectivity** within **memory DB** to other **components**
- Developed **signification functional user story**, which has **high impact on functionality level** using **GOF design pattern;** created **Junit test cases**, reached to **85% code coverage** and recognised with the **appreciation** from the **client**

Jul'08 to Jan'13 with Vendors Gloubussoft Pvt. Ltd. as Contractor in Persistent

TECHNICAL SKILLS

- **Languages**: Java1.8, Scala 2.11, Python, JavaScript, 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 Languages 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 WebSphere Connection Pool
- **RDBMS**: Db2, Oracle (RDBMS, Coherence), PostgreSQL, MySQL
- **Cache Servers**: Redis, EhCache, OSCache
- **Testing:** Junit, Mockito, Powermock, Selenium, SOAPUI, Postman, Grizzly
- **DevOps:** Jenkins, Bamboo
- **Build Tool**: Maven
- **Web & Application Servers**: Tomcat (6.0), IBM WebSphere, JBoss-Web Server
- **Repository**: GIT, SVN
- **Technologies**: Spring Scheduler, Terracotta Quartz Scheduler, RabbitMQ Messaging Services, DOM, SAX, ELK
- **Design Patterns**: GOF, J2ee Design Pattern, EIA

EDUCATION

- **MCA** in 2008
- **B.Sc. (Computer Science, Math, Physics)** from GGU Central University in 2005

CERTIFICATION

- OCJP 7