AMANPREET SINGH MANN

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EXPERIENCE

Specialist Programmer | **Infosys Ltd** – Chandigarh
FEB 2017 - PRESENT

- Worked on Big Data and Microservices Solutions(Agile Workflow) from Scratch
- Contributed significantly to all stages of software development life cycle, right from requirement analysis to architecture, technology stack, prototyping, development, testing, deployment, monitoring, enhancements etc.

System Engineer Trainee | **Infosys Ltd** – Mysore
AUG 2016 – JAN 2017

- Undergone 6 months hands on training covering OOP concepts (**Python**), RDBMS (**Oracle**), NoSQL (**MongoDB**), data structures, web technologies (**HTML5, CSS3, Java Script, Bootstrap**), Functional and Reactive programming (**Scala, Akka**)
- Top of the Batch in Training and thereby given a chance to take the Specialist Programmer HackerRank competition. Cracked it to transition into a Specialist Programmer Role.

EDUCATION

Bachelor of Engineering, Electronics and Communication | University Institute Of Engineering and Technology (PANJAB UNIVERSITY)

2012-2016

OBJECTIVE

Software Professional with 4 years of experience in some cutting edge enterprise solutions. Looking for interesting opportunities at the intersection of Big Data and/or Microservices.

SKILLS

- Hands-on experience in developing highly performant microservices(REST APIs) in Scala Play framework and GoLang.
- Proven competency in various Big data technologies like Spark Scala, Spark SQL, Spark Streaming, Spark MLlib, HADOOP, HDFS, Hive, Kafka etc.
- Good exposure to NoSQL databases like MongoDB and Cassandra.
- Implemented Unit Testing and Functional Testing frameworks like ScalaTest, Play Spec, Embedded Cassandra, JUnits etc. Configured Integration Testing using BDD (Selenium, Cucumber)
- Proficient in using CI/CD tools like Jenkins, Teamcity, Udeploy, Autosys(Scheduler).
- Experience of configuring various monitoring tools like Kibana(ELK stack) and datadog.

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I have been extremely fortunate to have been a part of some state of the art and complex projects of immense value to the clients. Got the opportunity to develop these highly reliable, resilient, fault tolerant and available microservices and big data-based solutions right from scratch and as a result, gained tremendous technical as well as domain specific expertise. Looking forward to continuing this awesome journey and contribute to some really good projects.

PROFESSIONAL SUMMARY

- Result-oriented software development professional with 4 years of experience and strong technical expertise in Scala microservices and Big Data technologies. An extensive working experience with Agile methodologies, globally distributed teams and on-shore/off-shore model. Dynamic, self-motivated, fast learner with strong work ethics. Flexible and versatile, with a proven track record to adapt to any new environment, domain and technology stack.
- Strong technical background with analytical thinking, problem solving and organizational capabilities.
- Part of projects right from their initial stages. Therefore, have an extensive experience of the various stages and transitions in the lifecycle of projects, starting from the requirements understanding and discussions phase.
- Have a zest for contributing to decisions concerning technology stack, architectural design, scalability, performance tuning, vision about end to end flow, testing frameworks, CI/CD (Devops) pipelines, monitoring frameworks etc.
- A knack for quick prototyping using POC's to prove the feasibility of critical project decisions.
- A taste for writing readable, maintainable, reusable, scalable and well documented code.
- Strong Client interfacing skills to represent microservices/Bigdata technologies.
- An effective communicator with good relationship building and interpersonal skills.

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PROJECTS

PAYMENTS OUTLIER DETECTION   JAN 2019 - PRESENT
Big Data Developer

Details: The payments outlier detection is a state of the art in house banking solution developed for a leading Bank headquartered in the U.S. having a global presence. It is a suite of multiple batch and streaming jobs for processing incoming real time streaming transactions and proactively identifying the likelihood of a transaction being a fraudulent transaction (payments that do not conform to clients' past patterns of payment activity) using advanced analytics, Artificial Intelligence (AI) and Machine Learning (ML).

· **Technology Stack**

   o Languages : Scala | Bash Shell Scripting(for automation)
   o DB/Storage : Hive | HDFS | MongoDB
   o Development Frameworks/Platforms : Hadoop, Spark(2.x+, spark-core, spark-sql, spark-streaming, spark MLlib,), Kafka, Spring Framework
   o Testing Frameworks : JUnits
   o IDE: Eclipse | Notepad++(for scripting)
   o Tools: Maven | Beeline | Bitbucket | TeamCity | Udeploy | Autosys | Tectia | Kibana
   o Documentation/workflow management : JIRA, SharePoint

· **Features and Responsibilities:**
   o Was involved in initial requirements understanding phase, design phase, technology stack finalization and prototyping phase.
   o Phase 1 : Developed a number of spark scala jobs for the suite :
   a) Batch Jobs :- Training job(used to generate ml models/logistic regression and heat map profiles using incremental client history data, which are used for scoring the realtime transactions) , Sync Jobs(syncing various tables/ data sources to the main training data table), Reconciliation Jobs(transaction count level), monitoring/alert generation jobs.
   b) Streaming Jobs :- RiskScoring Job (to receive streaming transactions through kafka and risk score them using the models and profiles created in training job), Feedback/Inquiry streaming job and history data streaming job.
   o Implemented retry mechanisms and fault tolerant strategies.

- o Involved in a number of POCs and eventual implementations to increase the performance/ scalability of the above mentioned job suite.
- o With new requirements coming in and need for the suite to handle a breathtaking amount of data, lead the feasibility/POC phase to recommend changes to make services highly scalable and faster.
- o Phase 2 : Rewritten the entire suite of jobs with considerable architectural optimizations keeping in mind the new load requirements, SLAs, performance optimization mechanisms, better possible retry, fault tolerance and monitoring mechanisms.
  With a more mature, scalable and robust architecture in place, the suite has been able to scale up considerably :
  a) Training Job : Able to handle ten times the clients, more than triple the volume of training data and able to generate profiles/models in one-tenth the time as before using less than half as many resources.
  b) Streaming job : Able to process transactions more than ten times faster.

- o Implemented a robust monitoring framework leveraging the ELK stack to set up dashboards/alerts through real time job metrics data generated through Spark Listeners implementation as well as customized in house real time monitoring jobs.
- o Automation of jobs using bash shell scripting and scheduling through autosys.

IDENTITY AND ACCESS MANAGEMENT SOLUTION   Feb 2017 - DEC 2018
Scala Microservices Developer

Details: Identity and Access management (IAM) solution is a bespoke enterprise level authentication and authorization solution (agile workflow) for a leading German retail company. It is based on open standard industry protocols of OAuth2, OpenID, SAML 2.0. It supports authentication and authorization of identities for accessing various secured applications via JWT tokens.

· **Technology Stack**

  - o Languages : Scala | Golang | JavaScript | ReactJS
  - o DB : CassandraDB | DSE Solr (elastic search)
  - o Development Frameworks : Play (web) | Akka (Actor model - concurrency and scalability)
  - o Testing Frameworks : ScalaTest, Play Spec, Embedded Cassandra, Selenium, Cucumber

- IDE : IntelliJ IDEA(for Scala development) | MS Visual Studio Code(for Golang development)
- Tools : SBT | Gitlab | Jenkins(CI/CD) | Kubernetes | Docker | Datadog | Kibana | Postman, Gatling
- Documentation/workflow management : JIRA, Confluence

· **Features and Responsibilities:**
  - Translated the OAuth2, OpenID and SAML specifications to technical user stories and developed the resulting REST APIs(in Scala) for Provisioning, Authentication, Authorization, User Management, Federation, Directory Management, Single Sign On etc.
  - Built Scala based micro services to implement Single Sign On and Single Log Out mechanisms.
  - Developed RESTful services for various CRUD operations to manage entities like users, authorization roles and positions.
  - Implemented Session Management use case in JavaScript accessing browser cookies.
  - Developed and added a completely new, automated microservice in Golang(to interact with Kubernetes API's) to the suite of other scala microservices mentioned before. This golang microservice too had everything configured(similar to other Scala microservices) like build tool, testing framework, monitoring framework, deployment etc.
  - Implemented and setup the testing frameworks for unit testing/functional testing/integration testing : ScalaTest, Play Spec, Embedded Cassandra, Selenium, Cucumber
  - Integrated with Kibana and Datadog service for log collection, monitoring and alerting purpose.
  - Prepared High Level and Low-Level Design Documents.
  - Conducted POCs as applicable in Architectural Decision-Making and Implementation approaches.
  - Client interaction for requirement understanding and demos.
  - Provided on-time support to business users to resolve issues.
  - Did code reviews, knowledge transfer sessions and mentored new recruits to the project.

HOBBIES

- Fascination for Urdu Poetry
- Fitness enthusiast