TAMKEEN, MOHAMMAD SAMAN

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6+ years experience in JVM languages and distributed big data technologies. Hands on with software architecture for developing scalable enterprise software. Qualified PG Diploma in ML & AI from IIIT-B. ***Currently working on solving ranking problem in travel domain***

Education

PG DIPLOMA IN MACHINE LEARNING & AI | 2019 | IIITB

- Distance learning program via UpGrad of 11 months duration ending in September, 2019

M.TECH. | 2016 | BITS. PILANI

- Major: Software Engineering
- Work integrated M.Tech. course of 2 year duration along with working with SAP
- Submitted a dissertation of "Evaluation of timeseries data management in HANA vs distributed big data store"

B.TECH. | 2014 | CHANDIGARH UNIVERSITY

- Major: Electronics and Communication Engineering
- Related coursework:
  - 6 week summer internship at IIT-Bombay where I worked in a project under the National Mission on Education through ICT (**MHRD NME-ICT**)
  - 6 week training on Embedded systems and wireless technology (microcontrollers & sensors)

Certification

RECOMMENDER SYSTEMS SPECIALIZATION | 2020 | COURSERA

- The specialization is offered by the University of Minnesota by the same professors who run movielens project.

Presentation

Presented "Akash Bazar" – an appstore for Aakash tablets at IIT-Bombay in 2013 (https://youtu.be/WD2EOsiQDGY)

Key Skills

- Languages known: Python, PySpark, Java, Scala, Javascript, SQL, RAML
- Components worked with: AWS (Redshift, DynamoDB, S3, etc.), Kafka, Cassandra, Spark, Databricks, SJS, SAP HANA, MySQL, Aerospike, Redis, Cloud Foundry, Openstack swift
- Frameworks used: Pandas, Numpy, Scipy, Matplotlib, Seaborn, Scikit-Learn, Spring, Jersey JAX-RS, Swagger, Node.js, ANTLR, SAP UI5, Cordova
- Micro service based application development and operation on cloud
- Application development using distributed system & CQRS
- Test driven development, hands-on with multi-threaded worker application

Work Experience

DATA SCIENTIST | GO-MMT | FEBRUARY 2020 ONWARDS

- Evaluating L2R algorithms to enhance user's experience while searching for a hotel

SENIOR SOFTWARE ENGINEER | GO-MMT | JUNE 2018 - JANUARY 2020

- Working on ranking algorithms (Collaborative filtering based model / Word2Vec based model) to improve the conversion rate of hotels
- Implemented A/B framework to test and compare the various ranking algorithms
- Analyzed users segments based on the device used to be leveraged in multiple systems
- Business anomaly detection tool

DEVELOPER | SAP LABS INDIA PVT. LTD. | APRIL 2016 - MAY 2018

- Worked on the core services of the IoT Application Enablement Platform – a PaaS offering
- Built the big-data enabled timeseries store using different distributed stores
- Constructed ingestion pipeline for timeseries data streaming into the system from the devices
- Migrated live timeseries data for a customer from non-bigdata store to big-data store

SCHOLAR | SAP LABS INDIA PVT. LTD. | AUGUST 2014 - MARCH 2016

- Pursued M.Tech. along with working for different teams at SAP (Work Integrated Learning Program)
- Developed UI for managing work packages in integration flows for HANA Cloud Integration
- Developed UI and back-end services for an internal job-portal

Projects

LEARNING TO RANK (FEBRUARY 2020 ONWARDS)

Developing a machine learning model to rank hotels for new users based on search context

- Using spark (python and scala api) to build the end-to-end training pipeline
- Using XGBoost model to train the L2R model

BUSINESS ANOMALY DETECTION TOOL (JUNE 2019 - JANUARY 2020)

A tool to detect business anomalies by monitoring and predicting transaction metrics

- Deployed timeseries forecasting algos (Holt-Winters algorithm, STL decomposition, fbprophet) to predict key metrics
- Built aggregation capabilities to detect anomalies across different dimensions

RESTAURANT SEARCH CHATBOT (APRIL 2019)

Build a restaurant search chatbot deployed on slack on top of Zomato api's. The bot can search for restaurant taking location, cuisine and budget as input from the user

- The chatbot was implemented as an assignment for the PGD ML & AI course
- The chatbot was built using RASA framework

REINFORCEMENT LEARNING BASED SYSTEM FOR ASSISTING CAB DRIVERS (AUGUST 2019)

Built an RL-based algorithm to help cab drivers maximise their profits by improving decision-making process on the field

- The system was implemented as an assignment for the PGD ML & AI course
- Implemented the Deep Q-learning (DQN) algorithm to implement the Markov Decision Process

EXPERIMENTATION PLATFORM TO RUN A/B TESTS (JUNE 2018 - DECEMBER 2018)

A platform based on facebook planout to define, run and track server-side experiments

- Implemented drools powered rule based engine to run experiments on targeted subset of users
- Implemented JAVA sdk for planout script management

DATA INGESTION PIPELINE MONITORING APPLICATION (JANUARY 2018 - MAY 2018)

Build an application to monitor the various components of data ingestion pipeline

- The application could be used to debug issues in the pipeline (kafka/sjs/spark cluster)
- The team won product innovation award for the project

DATA INGESTION PIPELINE FOR TIMESERIES DATA (JANUARY 2017 - MAY 2018)

An ingestion pipeline written in spark to read device data from kafka topics and persist in big-data store

- Created stateful streams to read from Kafka and write to big-data store
- Implemented notification mechanism for dynamic update of spark states (cache)
- Enabled checkpointing and spark relevant configuration for fault tolerance and high availability of the streaming job
- Wrote custom monitors to monitor the status of the ingested message on Kafka
- Implemented metering of ingested data to enable pricing

THING MODEL SERVICES FOR IOT APPLICATION ENABLEMENT (APRIL 2015 - DECEMBER 2016)

A set of REST APIs to enable modelling of real-world things into the system (as digital twin)

- Defined REST APIs using RAML and wrote implementation of the API using Jersey JAX-RS framework.
- Helped in development of DAO layer to talk to persistence using JDBC template and DBCP2 connection pools
- Wrote data definition files to create persistent artifacts (tables) and created views to handle complex transactions

BIG-DATA MIGRATION (MARCH 2017 - OCTOBER 2017)

A worker application written in Java to migrate data from non big-data store to big-data store

- Wrote the application from scratch using concurrency APIs from java8
- Developed and deployed the application as worker node and enabled auto-scaling based on number of instances
- Planned the 2-phased strategy to execute migration on customer's LIVE landscape to minimize downtime
- Ran the migration end-to-end on customer's landscape to move data for 300+ tenants

SCHOLAR PORTAL (MARCH 2015 - JULY 2015)

An internal job portal where manages would post job openings and scholars could apply for the same

- Created the UI view for scholars for viewing the posted jobs using SAP UI5
- Created the UI view for scholars to upload and modify their profile.
- Implemented REST endpoints to capture changes to user profile in XSJS (application layer of HANA)
- Designed and created tables in HANA to save the updated profiles