ADITYA SINGHANIA

BUSINESS APPLICATION DEVELOPER

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PROFESSIONAL EXPERIENCE

Analytical Calculation Engine
AUGUST 2017 - PRESENT

CITIBANK PVT. LTD., PUNE - TECH. ANALYST

- The team manages the counterparty credit RISK pricing of various assets for Citi. The portfolio wise numbers are generated for regulators and the higher management. The work consist of pricing more than four million trades per day across 1k simulation paths for 400+ tenor points.
- Currently replacing IBM Symphony grid with AWS (managed via Openshift) to spawn process intensive task of pricing trades through 10k simulation paths. This will save millions of dollars a year of Symphony licences and H/W costs.
- The work requires me to build Openshift libraries to handle pricers on AWS efficiently. This library works on launching multiple instances of the code per path for thousands of simulation paths across multiple AWS clusters, with automatic and dynamic scaling of the count of instances as per the requirement and request queue size. Currently enhancing the library to support various complexities of requests and failover scenarios.
- Built Apache Kafka libraries in Java and Python for sending pricing requests to the cloud. The library handles multiple producers sending requests to topics with multiple consumers listening per topic. Currently working on TLS encryption for sending messages securely.
- Planned and built a tool to extract, analyse and showcase crucial stats, and alerts in real-time about the different code runs across multiple boxes for different requests, using the logs, via ELK and X-pack. It saves hundreds of man hours which were spent searching through logs. Currently working on routing AWS logs from multiple pods across different nodes and across multiple clusters, to the stack.

Regulatory Hub Core Architecture
JANUARY 2017 - JULY 2017

CITIBANK PVT. LTD., PUNE - TECH. ANALYST

- The system handles the real-time streaming, enriching and reporting of trades (about a million trades a minute), as per the regulatory requirements (MIFID II).
- Built a central framework which was later leveraged for constructing all the sourcing upstreams' and reporting downstreams' pipelines for multiple products and regulators.
- Work required coding multiple microservices on Apache Storm for processing and Apache Kafka for distributed messaging, for sourcing trade data, making eligibility checks and enrichments, ordering and reporting in the required format. MongoDB was used to store interim data (entity, audits, rules etc.)
- Wrote Spring-boot REST service/ cron batch jobs (java 8) for accessing various databases (MySQL and MongoDB) for enrichment and information purposes.
- Junit testing for all code was written with 80% code coverage.

RegHub Feed Spec Manager
JULY 2016 - DECEMBER 2016

CITIBANK PVT. LTD., PUNE - TECH. ANALYST

- Worked on an application to store, manage and audit changes in the trade feed specifications.
- An end-to-end manager to handle data mappings of data that flows across multiple tables and databases.
- Involved in Brainstorming, Discussions, Database design and part implementation of the solution.
- Built Spring-boot REST services to fetch data stored in MongoDB.

EDUCATION

Visvesvaraya National Institute of Technology, Nagpur   AUGUST 2012 - APRIL 2016
B. TECH., COMPUTER SCIENCE AND ENGINEERING

Smt. Meherbanu College of Science, Akola   JULY 2010 - APRIL 2012
HSC, MAHARASHTRA STATE BOARD

Mount Carmel Sec. and Higher Sec. School, Akola   MARCH 2010
SSC, MAHARASHTRA STATE BOARD

TECHNICAL LEARNINGS

DAY-TO-DAY COMFORT-
- **Java** (java 8) - Spring boot, batch, REST, JDBC, Junit testing.
- **CLOUD**- AWS, Docker, Openshift (Kubernetes)
- **MESSAGING/PROCESSING/LOGS**- Apache Kafka (Confluent) Apache Storm, ELK, X-pack.
- **STORAGE**- MongoDB, MySQL, Hazelcast distributed cache.
- **VERSION CONTROL**- Git.

HAVE EXPERIENCE WITH-
- Python (3+/ 2+)
- C/C++, Javascript/HTML
- **FRONTEND**- AngularJS (limited)

POSITIONS OF RESPONSIBILITY

Citibank, Pune   MARCH 2018
MENTOR at CITI BRIDGE
- Mentor to a batch of college students from Cummins college, Pune. at the connect program
- Guided the batch for the project to build a full stack application based on stock market.

Make A Difference, Nagpur   MARCH 2013 - APRIL 2016
FELLOW: OPERATIONS/FINANCE
- The position strives to enable a hassle free, smooth and efficient running of all MAD Programs in the centers by maintaining close collaboration with the project heads and providing regular updates to the Center Authorities.
- The vertical also expands its dimension by supporting the Center Authorities in running the center effectively.
- A custodian of the city's finances for all the operations

VNIT, NAGPUR   JULY 2014 - APRIL 2015
STUDENT MENTOR
- Selected as the Student Mentor under the SMP program.
- A guide to a batch of 15 first year students for academic and social endeavors in the college.

ACHIEVEMENTS

- Scholarship holder for the JAGRITI YATRA '16.
- Attended the 10-day Vipassana meditation camp at Igatpuri, dist. Nashik in July '15.
- AIR 5271 in IIT-JEE '12.
- MTS talent search examination scholarship holder '09-'10.
- Winner of Debates and oratory competitions in school.