SONALI THOTE San Jose, CA 95131

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SUMMARY

Results-driven Software Engineer with ~6 years of proven industry experience across Finance, Product, and Agriculture domains. Master's graduate in Computer Science Engineering with Data Science specialization. Skilled in delivering scalable and highly-available systems. Proficient in both individual contributor and managerial roles for every task and responsibility. Actively seeking full-time opportunities and open to relocation.

KEY SKILLS

Java, Python, Scala, Git, Spark, Kafka, DataBricks, ETL, SQL, Data lake, Backend & RESTful API development, Azure, AWS Cloud, Distributed Systems, Django, Kubernetes, Flask, Docker

RESEARCH EXPERIENCE

Research Assistant; San Jose State University (Computer Engineering Department), – San Jose, CA **April 2023 – Present**

- Developed K3s Kubernetes based application framework to host various machine learning apps in mobile edge computing environment that focuses on predicting client mobility and also optimize container latency
- Demonstrated success on a 3-node K8s cluster by boosting performance to 60% by hosting machine learning apps with 20 replicas each, outperforming traditional cloud platforms

INTERNSHIP EXPERIENCE

Data Engineer Summer Intern; Robert Bosch, LLC. – Sunnyvale, CA **June 2022 – Aug 2022**

- Designed and implemented outlier removal and bottleneck detection for a manufacturing assembly line dataset, incorporating assembly station IDs and production data.
- Orchestrated a Databricks cloud batch job, efficiently processing 1 million records in 24 hours and achieved substantial operational enhancements via a scalable ETL pipeline in Scala, Azure, Spark, and Databricks, ensuring 100% code test coverage.

PROFESSIONAL EXPERIENCE

Software Engineer; Syngenta, Inc. – India **May 2019 – Jan 2021**

- Implemented a recommendation system for Syngenta's patent on Runoff and Leaching Algorithm used in the agriculture technology to help farmers calculate average fertility loss of soil, building REST APIs for applications consuming this algorithm
  - Served data point processing for ~10 Million farmlands in the European region using LucasDB
  - Generated heatmap of the soil that helped Syngenta improve business investment in Europe by 12%
- Built a microservice to read geometrical data of the farms and generate an excel data sheet to feed into Closed-Loop applications used by farmers to automate pesticide spraying around their farms
- Tech stack: Java, Postgre-Sql, Python, Flask, Spring boot, DynamoDB, AWS cloud, microservices

Software Engineer; Capco Technologies, Inc. – India **July 2017 – April 2019**

- Built a Travel Portal Application to fetch the travel data of the employees traveling for business purposes, application handled multiple requests to get approvals from concerned parties and get logistics arranged faster
  - Improved company-wide travel plan approval rate by ~70% eliminating previous large latency involved
- Developed API for Siam Commercial Bank (SCB) iPlan application using the Backbase framework to enable bank agents to provide aid in making sales of different insurance policies to the bank customers. Created a utility service to auto-generate PDFs using customer data received on the backend including insurance policy details
- Tech stack used - Java, MySQL, RESTful APIs, Microservices, Spring framework, Postgres SQL

Software Developer; IBM, Inc. – India **Aug 2016 – July 2017**

- Contributed to the pricing module of AT&T's enterprise-level application which was responsible for generating a bill of items selected by the customers and sending them a confirmation email with an e-signature requirement
- Learned standard programming practices that included test-driven development (TDD) with Java as backend and Oracle SQL as database. Unified development environments and performed unit and integration testing with JUnit and Maven

ACADEMIC PROJECT

Machine Learning Engineer; San Jose State University - San Jose, CA **Jan 2022 – Dec 2022**

- Implemented a bot detection system using random forest regression model to catch real-time bids placed by bots on auctioning sites with a prediction accuracy of 96%.
- Preprocessed and trained the model on a public dataset of size ~260MB and having more than 12 features. Also simulated an auctioning site that was attacked with bot requests to visualize successfully detected bots on the live bidding page.

EDUCATION

San Jose State University (SJSU) - San Jose, California **Jan 2021 - Dec 2022**

- MS in Computer Software Engineering with Data Science Specialization : Courses: System Software, Data Mining, Machine Learning, Deep Learning, Distributed Systems, Business Intelligence, Software Engineering Processes

SGBAU Amravati University - India **Aug 2009 - May 2013**

- BE in Computer Science & Engineering : Courses: Fundamentals of programming languages, Algorithms, Linear Algebra, Statistics, and Calculus, Theory of Computation, Operating Systems, Relational Databases, Computer Networks