

# Hariharasudhan Thirumurthy

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## SUMMARY

Proactive and results-driven Software Engineer equipped with a Master's in Computer Science, specializing in the design and deployment of scalable software solutions. Holds four and a half years of comprehensive experience in software development, including full stack and backend development, as well as real-time analytics. Certified as both an AWS Solutions Architect and Cloud Practitioner, demonstrating strong proficiency in advanced cloud technologies and architectures.

## SKILLS

**Web Technologies:** Spring Boot, Microservices, GraphQL, gRPC, REST APIs, React, NodeJS, Next JS, Typescript, JS, HTML, CSS.

**Database:** Map Reduce(Hive, Apache Spark), NoSQL(MongoDB, Redis, Cassandra), SQL (Oracle PL/SQL, Postgresql)

**Programming Languages:** Java, Python, Javascript, C/C++ (parallel programming with MPI), CUDA and GPU programming.

**Cloud Services:** AWS Cloud (EC2, SQS/SNS, API Gateway, Lambda, S3, , RDS, DynamoDB). GCP (BigQuery, BigTable, Firebase)

**CI/CD and Tools:** Terraform, Jenkins, Dockers, Kubernetes, Airflow, Kafka, Flink, GIT, Rabbit MQ, Elastic Search, Gradle, Maven.

## PROJECTS

- **Developed an Android application** to simplify attendance management by reading **RFID tags using NFCs** on phones (2016).
- **Smart home automation:** Used Embedded systems to control lights, fans, etc. through voice via an Android application (2016).
- Developed **embedded hardware to store crypto wallet information** securely. Leveraged **QT/QML** for UI.
- Developed an Enterprise-level e-commerce website for mobiles, having a mobile compare feature. Used **Angular** for the front end.
- **SwiftSoftJobs:** Designed a dynamic system tailored to streamline job applications by fetching over 100 software job postings across the US daily. This tool **enhances job seekers' visibility by ensuring timely applications**, capitalizing on data that indicates earlier applications significantly increase the likelihood of a hiring manager's review
- **Predict USDA for Recipes:** Developed ML model to predict health score for various recipes using tensorflowSpark.
- Built an **NN with transfer learning** on the image dataset to identify the concept activation vectors to analyze the correctness of the model. **Image classification, Object detection, and semantic segmentation** were analyzed with **OpenCV** to verify correctness.

## WORK EXPERIENCE

### Senior Software Engineer - Project Associate

March 2022 - June 2022

Indian Institute of Technology

Chennai, India

- Researched, analyzed, and designed an application that classifies people based on demographics from the geotags, enabling outdoor advertisers to maximize their reach and **boosting profit margins by 110%**.
- Developed a **real-time data** processing system leveraging **Kafka** to stream geo pings and **Apache Flink** to aggregate data, enabling clients to dynamically adjust their market strategies, and thereby **revolutionizing the outdoor ads industry**.

### Senior Software Engineer – Software Product Development

March 2020 - February 2022

MasDat Solutions LLP

Bangalore, India

- Produced low-latency statistical reports for metrics tracking and stakeholder reporting. Leveraged **Apache Airflow** to **extract data** and loaded it into **Hive**. Utilized **Presto** for **efficient querying** and report generation.
- Re-engineered the web application **to support multilingual capabilities, facilitating business expansion** into the Middle East and Europe while significantly improving scalability and user experience.

### Senior System Engineer

January 2018 - March 2020

Infosys Ltd for the client Goldman Sachs

Bangalore, India

- Collaborated with cross-functional teams like Credit Risk Management to develop a comprehensive application for client onboarding processes including negotiations, due diligence, risk management, and account setup. This **innovation reduced client onboarding time by 60%**.
- Identified data corruption in systems and developed validation routines and services to ensure data integrity during transfers, resulting in a **27% improvement in data accuracy**.
- Led the enhancement of a legacy application, including query optimizations and setting up new **ETL pipelines** to fetch data from updated sources while deprecating invalid data sources. **Ensured seamless and error-free operations** by independently managing the entire project lifecycle, from conceptualizing the vision and creating the roadmap to designing, implementing, testing, and successfully launching the solution.

## EDUCATION

Missouri University of Science and Technology, Rolla, MO

August 2022 - May 2024

Master of Science in Computer Science

GPA: 3.71/4