SAIHARSHITH KARUNEEGAR RAMESH

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EDUCATION

MASTER OF COMPUTER SCIENCE   December 2023
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN ; GPA : **4.0**/4.0   Illinois, USA

BACHELOR OF ENGINEERING IN COMPUTER SCIENCE   May 2021
ANNA UNIVERSITY ; GPA : **9.54**/10.0   Chennai, India

TECHNICAL SKILLS

Languages   Java | JavaScript | TypeScript | C++ | Python | SQL | HTML | CSS | GraphQL
Technologies / Frameworks   Spring Boot | Node.js | Express.js | MongoDB | Mongoose | GraphQL | MySQL | React.js | Git |
                           Neo4j | AWS | Apache Kafka

EXPERIENCE

GRADUATE RESEARCH ASSISTANT @ NCSA, UIUC   Jan 2023 – Aug 2023
Python | MySQL   Champaign, Illinois
- Designed a YOLOv8-based vehicle detection system, achieving **95%** accuracy in detecting vehicles and integrating the DEEPSORT algorithm to analyze acceleration of over **10,000** vehicles daily.
- Implemented a real-time data transmission mechanism to relay acceleration and camera position data to a MYSQL server.

SOFTWARE ENGINEER @ FRESHWORKS   Jul 2021 – April 2022
Java | MySQL | Spring Boot | Apache Kafka | AWS | Redis | REST APIs   Chennai, India
- Re-engineered the background server of Freshworks' CRM by transitioning from a monolithic architecture to a **multi-layered microservices** architecture. This reduced the network traffic overload by **40%**, optimizing system performance and reliability.
- Engineered a substantial enhancement in email deliverability by redesigning the sign-up process. This led to a **50%** reduction in the overall spam score percentage of the product, underscoring a commitment to delivering a **superior user experience**.
- Significantly improved the system efficiency by streamlining the sign-up request processing, achieving a **30%** reduction in the processing time. Implemented an **asynchronous** sign-up callback process for responsiveness and resource utilization.
- Enriched the email–deliverability metrics by **40%** by introducing de-duplication algorithms. Leveraged technologies, such as Redis Cache, to optimize data management and ensure the highest level of data integrity.

SOFTWARE ENGINEER INTERN @ FRESHWORKS   Feb 2021 – Jun 2021
Java | MySQL | Spring Boot | Ember.js | Apache Kafka | AWS | REST APIs   Chennai, India
- Collaborated with the Freshsales product team to successfully implement a new landing page feature in the customer timeline within a **2-day** timeframe, adhering to the customer's specified deadline.
- Improved the product build time by upgrading the build tool **(Gradle)**, resulting in a reduction from >13 minutes to **8** minutes.

SOFTWARE DEVELOPER INTERN @ CADENCE DESIGN SYSTEMS   May 2019 - July 2019
Python | MySQL   Bengaluru, India
- Collaborated with an agile team to refine machine learning algorithms, emphasizing advanced data preprocessing like normalization and feature engineering, enhancing model robustness.
- Utilized three ensemble learning methodologies, integrating predictions from **eight** distinct models, resulting in a substantial improvement, boosting predictive accuracy by **23%**

ACADEMIC PROJECTS

TAG-ME-IN
- Built a carpooling application that helps the University of Illinois students find people going to similar places and tag along.
- Built the front-end using React.js, the back-end using Node.js and Express.js, and used MySQL for the database.
- github.com/harshith2000/TagMeIn

THE DISEASE PREDICTOR
- Built an android application using **Java** that predicts different types of external diseases with an image input using **Convolutional Neural Networks** with **89%** accuracy. Created the dataset from scratch by web scraping.
- Won the **Most Feasible Project Award** in a 36-hour hackathon conducted by ACM, SVCE.
- github.com/harshith2000/The-Disease-Predictor

FARMERSBOOK
- Built a Web Application for Farmers in which they can post their problems and get suggestions from fellow farmers. The Website was made to be available in the native language.
- github.com/harshith2000/Famersbook