

# SAIHARSHITH KARUNEEGAR RAMESH

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## EDUCATION

### MASTER OF COMPUTER SCIENCE

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN ; GPA : 4.0/4.0

December 2023

Illinois, USA

### BACHELOR OF ENGINEERING IN COMPUTER SCIENCE

ANNA UNIVERSITY ; GPA : 9.54/10.0

May 2021

Chennai, India

## TECHNICAL SKILLS

### Languages

Java | JavaScript | TypeScript | SQL | C++ | Python | HTML | CSS

### Technologies / Frameworks

Spring Boot | Node.js | Express | MongoDB | MySQL | React.js | Git | GraphQL | AWS | Docker

## 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 in implementing a new landing page feature in Freshsales product within a tight **2-day** deadline, meeting customer requirements.
- Enhanced product build efficiency by upgrading the build tool (**Gradle**), reducing build time from over 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.
- Employed three ensemble learning methodologies, integrating predictions from eight models, boosting predictive accuracy by **23%**.

## ACADEMIC PROJECTS

### GITHUB OPEN SOURCE CONTRIBUTIONS

- Detected Bugs: 28 | Resolved Bugs: 28
- Notable Organizations: [google/guice](https://github.com/google/guice), [apache/commons-lang](https://github.com/apache/commons-lang), [manifold-systems/manifold](https://github.com/manifold-systems/manifold), [stleary/JSON-java](https://github.com/stleary/JSON-java)

### 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](https://github.com/harshith2000/The-Disease-Predictor)

### TAG-ME-IN

- Developed a carpooling application for University of Illinois students to find and join rides to similar destinations.
- Utilized **React.js** for front-end, **Node.js** and **Express.js** for back-end, and **MySQL** for database management.
- [github.com/harshith2000/TagMeIn](https://github.com/harshith2000/TagMeIn)