

# SAIHARSHITH KARUNEEGAR RAMESH

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## EDUCATION

### MASTER OF COMPUTER SCIENCE

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

Dec 2023

Illinois, USA

### BACHELOR OF ENGINEERING IN COMPUTER SCIENCE

ANNA UNIVERSITY ; GPA : 9.54/10.0

May 2021

Chennai, India

## TECHNICAL SKILLS

Languages	C++, Python, Java, SQL, Javascript, Go (Golang).
Tools	Git, MySQL, MongoDB, Neo4j, Apache Kafka.
Frameworks	Spring Boot, Node.js, React.js.
Platforms	AWS, Linux.

## EXPERIENCE

### GRADUATE RESEARCH ASSISTANT @ NCSA, UIUC

PYTHON | COMPUTER VISION

Jan 2023 – Present

Illinois, USA

- Joined an elite team of professors and graduate students to work on a pollution detection project. My focus was to introduce new ways for detecting pollution such as vehicle acceleration data instead of traditional pollution sensors.
- Designed and developed a YOLOv8 system to detect vehicles and measure each detected vehicle's position over time using the **DEEPSORT** algorithm to calculate its acceleration, providing valuable insights into traffic flow and patterns.
- Worked on various data collection and augmentation techniques and improved vehicle detection accuracy to more than **90%**.

### SOFTWARE ENGINEER @ FRESHWORKS

BACK-END | JAVA | MySQL | SPRING BOOT | REST API

Feb 2021 – April 2022

Chennai, India

- Re-engineered the background server of Freshmarketer by transitioning from a monolithic architecture to a **multi-layered microservices** architecture, reducing network traffic overload by **40%**.
- Achieved a substantial enhancement in email deliverability by redesigning the sign-up process, resulting in a **50%** decrease in the overall spam score percentage of the product.
- Optimized the processing time of the sign-up requests by **30%** by making the sign-up callback an **asynchronous** process.
- Improved the email-deliverability metrics by **40%** by introducing de-duplication algorithms. Technologies Used: Redis Cache.
- 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 product build time by upgrading the build tool (**Gradle**), resulting in a reduction from >13 minutes to **8** minutes.

## PERSONAL PROJECTS

### TAG-ME-IN

Node.js | EXPRESS | MySQL | ReactJS

- Built a carpooling application that helps the University of Illinois students to find people going to similar places and tag along with them.
- [github.com/harshith2000/TagMeIn](https://github.com/harshith2000/TagMeIn)

### THE DISEASE PREDICTOR

PYTHON | JAVA

- Built an android application 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)

## EXTRACURRICULARS & LEADERSHIPS

### VICE PRESIDENT @ KNOW-I (AI RESEARCH CLUB)

EX - JOINT SECRETARY @ THE ASSOCIATION OF COMPUTER ENGINEERS

June 2019 – Apr 2021

Anna University

- Coordinated diverse technical and non-technical events such as Coding Competitions, Seminars, and Paper Presentations, demonstrating exceptional organizational skills.
- Delivered informative seminars to impart fundamental computer science knowledge to junior participants and adeptly organized two national-level technical symposiums alongside a 24-hour hackathon.