

SAIHARSHITH KARUNEEGAR RAMESH

@sk120@illinois.edu | [@linkedin.com/in/saiharshithkr/](https://www.linkedin.com/in/saiharshithkr/) | [@github.io/saiharshith](https://github.io/saiharshith) | Champaign, Illinois

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

- C++ | Python | Java | SQL, Javascript | Spring Boot | jQuery | Git | MySQL | MongoDB | Apache Kafka | Node.js | React.js | Neo4j
- Back-end | Microservices | Front-end | Full-stack

EXPERIENCE

GRADUATE RESEARCH ASSISTANT @ NCSA, UIUC

Jan 2023 – Present

PYTHON | COMPUTER VISION

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

Feb 2021 – April 2022

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

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.
- Enriched 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

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

FARMERSBOOK

BACK-END | MySQL | REST API

- Built a **Web Application for farmers** through which they can trade crops, post their problems and get solutions from fellow farmers.
- github.com/harshith2000/Famersbook

EXTRACURRICULARS & LEADERSHIPS

VICE PRESIDENT @ KNOW-I (AI RESEARCH CLUB)

June 2019 – Apr 2021

EX - JOINT SECRETARY @ THE ASSOCIATION OF COMPUTER ENGINEERS

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 juniors and organized two national-level technical symposiums alongside a 24-hour hackathon.