SAIHARSHITH KARUNEEGAR RAMESH

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EDUCATION

MASTER OF COMPUTER SCIENCE   **Dec 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

Strong Areas	MERN	Back-end	Databases	Front-end	Microservices	Full-stack
Languages	Java	Javascript	C++	Python	SQL
Technologies / Frameworks	Node.js	Express.js	MongoDB	Mongoose	GraphQL	MySQL	Spring Boot	React.js	jQuery	Git	Neo4j AWS	Apache Kafka

EXPERIENCE

GRADUATE RESEARCH ASSISTANT @ NCSA, UIUC   **Jan 2023 – Present**
Python | Computer Vision | MySQL   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.
- Created a system to send the vehicle acceleration and camera location details to a server in real time.

SOFTWARE ENGINEER @ FRESHWORKS   **Feb 2021 – April 2022**
Java | MySQL | Spring Boot | Apache Kafka | AWS | 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.js | MySQL | React.js

- 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
Java | Python

- 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

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.