

Siva Kumar Reddy Surasani

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SUMMARY

Software Engineer with over 4 years of experience in software development, system optimization, machine learning, and large-scale data analysis, currently pursuing a master's in computer science.

EXPERIENCE

Software Developer

Sep 2023 - Present

University of North Texas | Denton, TX

- Optimized data access by designing efficient queries and schemas using **SQL and NoSQL (MongoDB)** databases.
- Developed software for social graphs to insert and delete edges in large-scale networks using **OpenMP** and **C++**.
- Built a **Python, Flask**, and **React-based chatbot** to guide web developers on WCAG accessibility and best practices.
- Redesigned **FAISS vector storage** structure on **GCP** for **LLM-based** retrieval, enabling per-file indexing and metadata separation, improving similarity search efficiency by 40%.

Senior Software Engineer

July 2022 - Aug 2023

Justdial | Bangalore, India

- Created web pages using **React** for Justdial's fintech vertical - 'Jdpay' which is generating 20 million INR daily.
- Optimized Relational database tables, **APIs** in backend systems using caching and modern optimization techniques.
- Built a **Python**-based image cropping tool using **OpenCV**, increasing image processing efficiency.
- Migrated payment APIs to **Golang**, achieving 30% faster response times and improved transaction handling on Justdial.

Software Engineer

Aug 2020 - June 2022

Droom | Gurugram, India

- Developed web pages for vehicle listings and auction management, improving user experience and auction workflows.
- Implementation of **Docker**-based containerization for API services, improving deployment efficiency.
- Built a recommendation system using **Elasticsearch** to suggest the top 5 vehicles based on user inputs.
- Developed listing-matching APIs using **PHP**, delivering the top 3 results, enhancing user engagement and traffic.

EDUCATION

University of North Texas, Denton

Aug 2023 – May 2025

Master of Science in Computer Science

GPA: 4.0 / 4.0

Indian Institute of Information Technology, Kota

July 2016 – May 2020

Bachelor of Technology in Electronics and Communication Engineering

GPA: 3.4 / 4.0

SKILLS

Programming Languages: PHP, Python, Golang, React, Laravel, Flask, jQuery

Back-end: API, Microservices, System Design, Postman

Databases and Storage: MySQL, Elasticsearch, Redis, MongoDB

Machine Learning and AI: Model Deployment, TensorFlow, NLP, Pandas, NumPy

Web Development Practices: RESTful APIs, Ajax, GIT, Agile, RabbitMQ, Model View Container

Cloud and DevOps: AWS (Elastic Beanstalk), GCP, Firebase

COURSEWORK

Graph Theory, Computer Networks, Data Structures and Algorithms, Operating Systems, Databases, Feature Engineering, Machine Learning, Data Modeling, Data Mining, and Software Engineering.

ACADEMIC PROJECTS

Accessibility Chatbot

github.com/sivasurasani/A11Y-ChatBot

- Provides Accessibility guidelines and best practices for building web applications using 1000 rows of data.
- Built an API by fine-tuning the BERT model with custom data, achieving over 99% accuracy.
- Technologies: Python, Scikit-Learn, React.js, Flask, and AWS.

Portfolio Website

github.com/sivasurasani/portfolio

- Created a personal website showcasing projects, research, and skills with an interactive and responsive page.
- Technologies: CSS, HTML, and React.js