

Sagar Swami Rao Kulkarni

sagarswamirao@gmail.com | +1(303) 434 7446
sagarswamirao.github.io | Linkedin.com/in/sagarswamirao

Education

MS in Computer Science | University of Colorado, Boulder, CO, USA: GPA: 4/4

May 2025

Relevant Courses: Object Oriented Analysis & Design, Computer Vision, Natural Language Processing, Neural Networks

B.Tech in Computer Science and Engineering | CMR University, INDIA: GPA: 9.41/10 (Gold Medalist)

Aug 2020

Relevant Courses: Machine Learning, Deep Learning, Programming with Java and Python

Technical Skills

Programming Languages & Database Systems: C, C++, Java, Python, JavaScript, TypeScript, MySQL, MongoDB, Neo4J, Redis

Frameworks & Libraries: Angular, React.js, Flask, Spring, Popoto.js, Three.js, PyTorch, OpenCV, Scikit-Learn

Tools & Technologies: HTML, CSS, Docker, Eclipse, Jupyter, VSCode, Spring Suite, Git, GitHub, Postman, Tomcat, Amplitude, AWS, Azure, JUnit, PyTest

Experience

AI Full-Stack Developer | [Quinnox](#) | Bangalore, IN

Jan 2021 – Jul 2023

- Led design and development of Enterprise Resource Graph and AR-VR landscape using Angular, Popoto.js, and Three.js. Optimized memory-intensive and time-consuming REST APIs with smart caching mechanisms, achieving an 80% reduction in compute time. Utilized Agile methodology for project management. Developed automated data injection scripts from Excel to Neo4J.
- Pioneered an object detection model leveraging computer vision techniques to monitor loading and wrapping stations within the client's warehouse, yielding a notable 76% detection accuracy and significantly enhancing operational efficiency. Implemented parallel processing techniques to reduce model training time from 2 hours to 32 minutes per epoch, facilitating faster model training and improved productivity.
- Developed a React full-stack app for Home Healthcare Orders, leading the entire software development lifecycle. Implemented Python scripts, which reduced data injection time by 62.5%. Incorporated continuous integration (CI/CD) pipelines for automated testing and deployment, and implemented Test-Driven Development for the backend Java.
- Implemented a new automatic payment status tracker service for handling payments across multiple platforms. Additionally, implemented Redis Bulk Data Upload Trigger using AWS Lambda functions, resulting in a 50% improvement in data upload speed. Proficient in setting up and deploying code on Tomcat and EC2 instances.

NLP Full-Stack Intern | [Senseforth AI](#) | Bangalore, IN

Mar 2020 – May 2020

- Initiated research on scalable parsers for PDFs, PPTs, and Word documents, employing NLP techniques.
- Enhanced document parsing capabilities by implementing Lucene indexing, Bird's Eye Search, and word spaces calculations. Furthermore, tweaked the PDFBox's open-source code to fetch fonts, indentations and distances in PDFs.

Projects

Human vs Machine Generated Text Classifier

Oct 2023 – Present

- Participated in SemEval 2024 competition, achieving 87% F1 score in distinguishing human generated from machine generated text. Conducted feature engineering and fine-tuning of RoBERTa models. Publishing a paper on the same.

Phone Like-Dislike Classification

Jan 2020 – Aug 2020

- Developed and implemented MP Neuron and Perceptron models to predict market acceptance of phones based on specifications, leveraging real data from GSM Arena; achieved an accuracy rate of 82% in classifying phones into like-dislike preferences. Documented and published an [IEEE paper](#) on the same.

SecQ-Steganography

Aug 2018 – Dec 2018

- Pioneered an advanced data-concealing steganography technique within images, fortified with the dual layers of encryption methods AES and DSA. This innovative approach, complemented by MD5 hashing, delivered an unparalleled level of security and data protection, ensuring the utmost confidentiality and integrity of concealed information.

Key Achievements

- Awarded the **Gold Medal** for securing first place throughout my Bachelors in Computer Science and Engineering.
- Received the 2022 **On the Spot Award** and the 2021 **Pat on the Back Award** for outstanding performance & contributions.
- Won the **Zonal Level** title in the Azure Skynet Hackathon, organized in collaboration with IIT Hyderabad in 2018.