

Sai Lohith Motupalli

9134136530 | Atlanta, GA | sailohith1439@gmail.com | linkedin.com/in/sailohithm | github.com/Motupallisailohith

EDUCATION

Georgia State University

Master of Science in Computer Science (GPA: 3.72/4.0)

Atlanta, GA

Jan 2024 – Dec 2025

Lovely Professional University

Bachelor of Technology in Computer Science (GPA: 3.4/4.0)

Jalandhar, India

Aug 2018 – May 2022

EXPERIENCE

Graduate Research Assistant

Georgia State University

Atlanta, Georgia

Aug 2024 – Present

- Achieved ~86% accuracy in cancer subtype prediction by building a TensorFlow model on RNA-Seq data (TCGA), fine-tuning a pretrained 3D DenseNet, and simplifying data inputs using PCA.
- Reduced preprocessing time by 40% through automating neuroimaging workflows for sMRI downsampling (121×145×121 voxels) using Python and SPM12 with batch scripting and parallel processing

Software Engineer

Bosch Global Software Technologies

Bangalore, Karnataka

Jan 2022 – Dec 2023

- Scaled the report generation system from **90 to 320** reports/hour and saved over **\$250K/year** in ops cost by offloading processing to **Apache Airflow** and caching high-frequency filters in **Redis**.
- Optimized request latency by over **80%** for **100+** concurrent users by tuning **Spring Boot** thread pools and enabling async tool chaining with queue-backed execution.
- Reclaimed engineering time by **140+** hours/month by cutting **CI** build time from **30 to 6 minutes** through **Gradle** caching, parallel **JUnit** execution in **Docker**, and **Jenkins** pipeline optimization for Spring Boot services

Software Engineering Intern

DevRabbit (Client:Oportun)

Hyderabad, Telangana

Aug 2021 – Dec 2021

- Accelerated time-to-interaction by **70%** in transaction dashboards by coordinating **REST** chunked responses with **React** Suspense and progressive hydration.
- Enhanced delivery reliability for **10K+** daily transaction alerts by contributing to a **Kafka**-backed message dispatch system using **Spring Boot** and **REST APIs**, decoupling alert workflows from payment processing.

PROJECTS

TSA Administration Smartpass | [Github](#), Java, SpringBoot, PostgreSQL, React

Jan 2025 – Present

- Developed a distributed TSA checkpoint management system using Java, Spring Boot microservices, and PostgreSQL, enabling real-time passenger flow optimization.
- Integrated SITA Flex APIs and Open Platform Software Library (OPSL) for secure identity verification.

Landmark detection | [Github](#), Python, Tensorflow, PySpark, PIL

Feb 2025 – May 2025

- Built a conditional GAN with a heatmap bottleneck architecture, enabling unsupervised landmark discovery.
- Developed differentiable spatial softmax layers with Gaussian rendering for keypoint heatmaps with 2.58% MSE.
- Implemented perceptual loss with VGG feature matching, outperforming supervised methods by 3x sample efficiency in landmark regression tasks. matching

TECHNICAL SKILLS

Languages & Databases: Java, Python, R, SQL, NodeJS, JavaScript, C# MySQL, MongoDB, Oracle, Redis

Frameworks & Tools : Spring Boot, ElectornJS, Django, Tensorflow, Docker, Jenkins, ReactJS, .Net Core, AWS,

Applied skills : Machine Learning, Coding, REST API development, real-time dashboards, object-oriented programming

ACHIEVEMENTS & CERTIFICATIONS

[BigQuery for Machine Learning](#) | [Best Innovation-Bosch 2022](#) | [Data Structures & Algorithms](#)