Sai Lohith Motupalli

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EDUCATION

Georgia State University — Atlanta, GA
Master of Science in Computer Science (GPA: 3.82/4.0) — *Jan 2024 – May 2026*

Lovely Professional University — Jalandhar, India
Bachelor of Technology in Computer Science (GPA: 3.87/4.0) — *Aug 2018 – May 2022*

EXPERIENCE

Graduate Research Assistant — Atlanta, Georgia
Georgia State University — *Aug 2024 – Present*

- Delivered ∼**86% accuracy** in cancer subtype classification by engineering an **RNA-Seq preprocessing pipeline** using **PCA** and **TensorFlow** on **TCGA** data..
- Reduced **ETL time by 40%** by automating **sMRI downsampling** (121×145×121 voxels) in **Python** using **SPM12** and **parallel batch jobs**.

Software Engineer — Bangalore, Karnataka
Bosch Global Software Technologies — *Jan 2022 – Dec 2023*

- Reduced **ECU validation time by 30%** by developing automated **HIL/SIL test scripts** using **ETAS LABCAR** and **INCA**, enhancing test coverage and efficiency.
- Delivered **high-quality C/C++ code** for **embedded software modules**, adhering to **test-driven development** practices and ensuring compliance with industry standards.
- Improved **diagnostics reliability by 70%** by delivering **test-driven C++ modules** and refining **embedded build flows**.
- Enhanced **debugging capabilities** by developing **Python-based tools** for analyzing **neuroimaging workflows**, facilitating efficient troubleshooting and system integration.

Software Engineer (Internship) — Hyderabad, Telangana
DevRabbit (Client:Oportun) — *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

ClausePilot | *Github*, Java, SpringBoot, PostgreSQL, React — Jan 2025 – Present

- Delivered personalized clause insights by integrating 11+ microservices using Spring Boot and Document AI.
- Cut manual review time by 60% by automating clause parsing and classification with Apache Tika and ML models
- Enabled scalable contract workflows by engineering event-driven services with Redis and PostgreSQL.

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

- **Cracked Cognizant GenC Next role** by completing the Digital Nurture program with specialization in full-stack.
- **Won Bosch Fit.Fest Hackathon (AI Track)** by building a PDF comparator to identify deltas in LLM training data
- **Google Cloud Ready Facilitator Program**, earned through hands-on labs on deploying and managing modern applications through Google Cloud Platform.