# Sri Ramm Sekar Sasirekha

sriarammss13@gmail.com | LinkedIn | GitHub | (352)-771-6643 | College Park, Maryland

## WORK EXPERIENCE

**Mavenir Systems Private Limited** — **Bengaluru, India**

*Member Of Technical Staff-I, Technical Support* — *Aug 2024 – June 2025*

- Contributed to the **5G SA FDD (sub-6)** system test team for **Dish Wireless (Boost)**, executing sanity, regression, and capacity testing for feature verification including **Carrier Aggregation, Inter-CU Handover, and Intra-CU Handover**.
- Performed **data cleaning, preprocessing, and feature engineering** on proprietary O-RAN drive test datasets using **Python and Pandas**; analyzed **Grafana and Prometheus logs** to support **data-driven troubleshooting** and cross-team validation.
- Trained and evaluated **supervised learning models** including **XGBoost, Random Forest, and Scikit-Learn pipelines** for QoS prediction, achieving $\mathbf{R^2 = 0.936}$ and outperforming linear baselines ($R^2 = 0.77$); assisted with **model tuning and validation** across multiple experiments.
- Designed a **3GPP-compliant signal imputation algorithm** to reconstruct **40% of missing SCell measurements (RSRQ, SNR)**; **documented methodology, validation results, and findings** for internal publication.

*Graduate Engineer, Software* — *July 2023 – July 2024*

- Collaborated with cross-functional teams to replicate field environments and optimize load deployments, reducing system outages by **25%**; wrote **automation scripts** to streamline test data workflows and improve validation efficiency.
- Validated 3GPP-compliant wireless features by implementing **Carrier Aggregation and Inter/Intra-CU Handovers in Landslide**; participated in **code reviews** and team technical discussions.

*Graduate Engineer Intern, Software* — *Jan 2023 – June 2023*

- Conducted drive tests with 3GPP release features for **5G-NR O-RAN**; identified **200+ functionality errors** and submitted **50 feature enhancements**, **documenting findings** in structured test reports for engineering teams.
- Conducted **CUCP capacity testing** and integrated vCU solution with **Landslide Spirent**, increasing capacity by **50%**; developed **Python scripting and automation** for data collection and workflow support.

## TECHNICAL SKILLS

**ML & Data Science**: Supervised Learning, Unsupervised Learning, Model Evaluation, Data Cleaning, Data Preprocessing, Feature Engineering, Data Visualization, Probability & Statistics, NLP, Computer Vision, Anomaly Detection
**Languages & Frameworks**: Python, TensorFlow, Keras, PyTorch, Scikit-Learn, Pandas, NumPy, OpenCV, SQL, FastAPI, Celery
**Databases & Storage**: PostgreSQL, Redis, SQLAlchemy (ORM), Alembic, SQL Query Optimization, Vector Databases
**Dev Practices**: Scripting & Automation, Code Reviews, Model Documentation, Model Validation, Collaborative Development, Agile Teamwork
**Telecommunications**: 5G RAN, Massive MIMO, Wireless Network Modeling & Optimization, Grafana

## PROJECTS

**Postpartum Exercise & Recovery App** | *Python, OpenCV, MediaPipe* | **Hackathon Winner – Best Startup Idea** — **Nov 2025**

- Built a real-time **computer vision** system using **OpenCV and MediaPipe** to detect **33 body landmarks** and evaluate exercise form with sub-second latency; **documented model behavior, outputs, and evaluation metrics** for team review.
- Implemented **smoothing and unsupervised signal processing techniques** to stabilize landmark jitter, improving joint-angle estimation for recovery feedback workflows.

**MedViz AI Platform** | *Python, FastAPI, MedGemma, MedSAM* — **Feb 2026 – Present**

- Performed **data preprocessing and feature extraction** on multimodal medical scan inputs (X-ray, CT, MRI); integrated **MedSAM** for pixel-level segmentation and **evaluated model outputs** against clinical benchmarks.
- Built an **LLM-driven inference workflow** and wrote **automation scripts** with FastAPI and Celery to support end-to-end data and inference pipelines.

## PUBLICATIONS

**Cross-Organ Bridge Transfer Learning for Lung Cancer Detection** | *IEEE Publication* — **Oct 2023**

- Developed a lung cancer classification approach by **fine-tuning a VGG-19 model** pre-trained on kidney CT images; applied **supervised learning, model evaluation, and validation** techniques to address lung scan data scarcity.
- Achieved **93% accuracy**, surpassing non-bridge transfer learning models by **3%** and cross-modality models by **18%**; **documented methodology and results** in an IEEE peer-reviewed publication.

## EDUCATION

**University of Maryland College Park** — **College Park, MD**

*Master of Science in Applied Machine Learning* | ***GPA: 4.0/4.0*** — *Sep 2025 – Present*

**Amrita School of Engineering** — **Coimbatore, India**

*Bachelor of Technology in Electronics and Communication Engineering* — *Jun 2019 – Aug 2023*