SRI LAKSHMI PRIYA DWARAKANATH

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WORK EXPERIENCE

Jiang Lab Arizona State University — **Arizona, AZ**
Research Assistant — **September 2024 - Present**

- Train and test BERT, T5, DNABERT, and ProtBERT on genomic sequences, achieving 92% F1 for mutation prediction.
- Benchmark Swim Transformer, ESM-2, and diffusion models against CNN/RNNs, improving rare-class detection.
- Optimize model training with CUDA kernels and memory tuning, serving 5K+ predictions/day on SageMaker 30% faster.
- Build 3D genome visualizations in Python + Blender, enabling researchers to detect phenotype patterns 2× quicker.

Arizona State University, Technology Enterprise — **Arizona, AZ**
AI Specialist — **June 2025 – Present**

- Designed agentic AI assistants with LangChain + GPT-4, automating reporting and cutting manual workload by 35%.
- Developed RAG pipelines integrated with Salesforce + ASU data, improving enterprise query accuracy by 25%.
- Roll out Streamlit and Power BI dashboards for 200+ staff, iterating features from feedback and running A/B testing.
- Prototype multimodal content tools with Stable Diffusion and Adobe Firefly, reducing creative cycle time by 40%.

ANZ Operations AND Technology — **Remote**
Data Analyst — **December 2022 – July 2024**

- Analyzed 1M+ customer records and built predictive models, improving targeting precision by 30% & cutting churn 23%.
- Orchestrated real-time ETL with PySpark, Airflow, and Kafka, while automating Tableau dashboards via Docker + GitHub.
- Reduced campaign delays by 40% via query optimization & schema redesign in PostgreSQL, improving analytics speed.
- Automated data validation systems to replace manual checks, ensuring 99.9% data integrity and consistent quality.

PROJECTS

GenAI Summarizer — T5, RAG, FastAPI, AWS

- Fine-tuned T5 on 100K+ articles with retrieval for real-time Q&A, achieving ROUGE-2 of 0.72 and cutting prep time 40%.

Autoinsights — GPT-4, LangChain, Streamlit

- Built an LLM that generates SQL queries, summaries, and charts, reducing manual analysis 60% with 95% accuracy.

Benchmarking Segmentation Models — Mask R-CNN, Swin Transformer, DETR, YOLOP, CUDA

- Evaluated 5+ segmentation models on 500K medical images with CUDA quantization, reducing latency by 15% overall.

Schizophrenia Diagnosis using EEG Signals — Spiking neural networks, CNN, Random Forest, PyTorch

- Trained a hybrid model on 10K EEG signals, reaching 86% accuracy and supporting faster, more reliable diagnosis.

EDUCATION

ARIZONA STATE UNIVERSITY — **Tempe, AZ**
Master of Science in Robotics and Autonomous Systems – Artificial Intelligence(GPA: 3.83) — **May 2026**

VISVESVARAYA TECHNOLOGICAL UNIVERSITY — **Bengaluru, India**
Bachelor of Engineering with Honors in Artificial Intelligence and Machine Learning(GPA: 3.89) — **July 2023**

TECHNICAL SKILLS

Programming: Python, R, SQL, C++, Java, MATLAB, CUDA
ML Frameworks: PyTorch, TensorFlow, JAX, cuDNN, Scikit-learn, Keras, XGBoost, LightGBM
NLP: Hugging Face (BERT, T5, DNABERT, ProtBERT), LangChain, spaCy, RAG pipelines
Computer Vision: OpenCV, ONNX Runtime, GANs (ESRGAN), diffusion models, model optimization/quantization
Data Tools: Pandas, NumPy, SciPy, Tableau, Power BI, QlikSense
Cloud & DevOps: AWS (SageMaker, EC2, Lambda, S3), TensorRT, Docker, Kubernetes, FastAPI, Flask, GitHub Actions(CI/CD)

PUBLICATIONS

Alzheimer's diagnosis study using machine learning models (92% accuracy). Published in Springer, 2024. DOI: 10.1007/978-981-99-4071-4 16

CERTIFICATIONS

AWS Certified Cloud Practitioner — **Issued June 2025**
Salesforce Certified Agentforce Specialist — **Issued August 2025**