PREM SWAROOPA NANDA RAMALINGAM

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Location: Chicago, IL, USA

EDUCATION

Governors State University, Chicago, IL   Aug 2025 – Present
Master of Science, Computer Science — Expected Graduation: May 2027
GPA: 3.9

Siddharth Institute of Engineering and Technology, India   Jun 2016 – Sep 2020
Bachelor of Technology, Mechanical Engineering
GPA: 8.15

SKILLS

Deep Learning: Transformers, BERT-style models, CNN, RNN, LSTM, GRU, GANs, Attention Mechanisms, Reinforcement Learning Agents, Policy Optimization
ML Frameworks: PyTorch, TensorFlow, Keras, ONNX, HuggingFace, Scikit-Learn
Research Tools: Experiment design, benchmarking, evaluation metrics, ablation studies, model interpretability
Core ML: Optimization, quantization, pruning, distillation, mixed-precision training, INT8/FP16 inference
NLP & CV: Tokenization, embeddings, multimodal learning, object detection, image augmentation
Programming: Python, Java, SQL, JavaScript, TypeScript, C/C++ (basic), Go (beginner)
Systems & Data: BigQuery, DynamoDB, SQL Server, Dataflow, Firestore, Redshift, S3/Glue
Networking & Protocols: TCP/IP, UDP, routing fundamentals, basic telecom protocols (3GPP, signaling)
Tools: Git, Docker, Kubernetes, API development, Jira, Linux (system-level)

WORK EXPERIENCE

AI Requirement Prioritization using Graph Reinforcement Learning   Aug 2025 – Present
- Engineered requirement graphs using probability and perplexity metrics, improving predictive analysis accuracy by 18%.
- Developed Python/Java modules modeling cross-feature dependencies, reducing mapping time by 30%.
- Performed behavior analysis across system environments and validated outputs for prescriptive workflows.
- Created dashboards and stakeholder-facing reports summarizing trends across 6+ enterprise datasets.

Software Engineer — HCL Technologies (Chennai SEZ ELCOT)   Nov 2021 – Aug 2023
- Designed ETL pipelines (AWS Glue, S3, Redshift, BigQuery) improving throughput by 35%.
- Automated workflows, reducing manual processing time by 40% and increasing reliability.
- Executed complex SQL transformations for 20M+ records supporting analytics and insights.
- Conducted integration checks, debugging, and release readiness testing across services.
- Performed root-cause analysis on system-level failures and improved uptime via proactive mitigation.
- Collaborated with analysts, engineers, and business teams on data-driven decision activities.

PROJECT EXPERIENCE

MobileNetV2-Based Object Detection   Jan 2025 – Mar 2025
- Built ML pipeline with mixed-precision training and SQL preprocessing for 9,963 images across 20 classes.
- Improved model precision to 0.847 through hyperparameter tuning and validation.

Innovative UX Design — UniLife Hub & Career Launcher   Jan 2024 – Mar 2024
- Designed UX workflows and prototypes based on 30+ user interviews and behavioral analysis.
- Improved usability metrics by 25% using iterative testing and research-backed redesigns.

HawkGen Mobile Application   Aug 2023 – Dec 2023
- Built academic productivity app with modular architecture, reducing feature delivery time by 15%.
- Authored user stories, functional flows, and documentation for developers and testers.

Hands-On Projects — HCL Technologies   Nov 2021 – Aug 2023
- Developed Dataflow pipelines for 100GB+ datasets supporting analytics and SLA monitoring.
- Improved data load performance by 20% via optimized schema design and partitioning.
- Implemented event-driven automation using Pub/Sub, reducing latency by 18%.

HONORS & ACHIEVEMENTS

- Optimized BigQuery pipelines improving performance by 20%.
- Delivered UX prototypes ranked among top innovation-focused submissions.
- Built automation scripts reducing manual operational time by 35%.