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, GPA: 3.0

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

SKILLS

Languages: Python, Java, SQL
Cloud: AWS (S3, SNS, Glue, RedShift), GCP (Dataflow, BigQuery, Firestore, GCS)
Databases: MySQL, MongoDB
Tools: Git, JIRA, Apache Spark
Other: SDLC, Agile, UX Design, Technical Writing

WORK EXPERIENCE

AI Requirement Prioritization using Graph Reinforcement Learning Aug 2025 – Present

- Designed rule-based requirement graphs using perplexity and probability metrics to model dependency strength and feature relationships.
- Developed a Deep Q-Learning agent to learn optimal requirement selection policies for dynamic software release planning.
- Evaluated the framework on datasets from Zoom, Webex, Teams, Word, PowerPoint, and Excel, demonstrating improved scalability and prediction accuracy.

Software Engineer – HCL Technologies (Chennai SEZ ELCOT)   Nov 2021 – Aug 2023

- Built and optimized large-scale data pipelines using AWS S3, Glue ETL, RedShift, SNS, and DynamoDB.
- Improved data load scalability and system performance through debugging and tuning efforts.
- Worked with GCS, Dataflow, BigQuery, and Firestore for large-scale storage and processing.
- Automated data workflows across cloud platforms, reducing manual processing time.

PROJECT EXPERIENCE

MobileNetV2-Based Object Detection   Jan 2025 – Mar 2025

- Built object detection model with 9,963 images across 20 categories using MobileNetV2.
- Applied mixed-precision training and tuning, achieving 0.847 precision and 0.6347 F1-score.

Innovative UX Design – UniLife Hub & Career Launcher   Jan 2024 – Mar 2024

- Designed student-focused UX platforms using research, storyboarding, and wireframing.
- Evaluated usability using metrics like efficiency, satisfaction, and task success.

HawkGen Mobile Application   Aug 2023 – Dec 2023

- Developed student task/academic management app with tracking and planning features.
- Reduced development time by 15% through modular architecture.

Hands-On Projects – HCL Technologies (Chennai Sez Elcot)   Nov 2021 – Aug 2023

- Designed Dataflow pipelines and processed large datasets using GCS.
- Improved storage and load performance with optimization techniques.
- Built event-driven systems using Pub/Sub and automated tasks with Python.

HONORS & ACHIEVEMENTS

- Improved performance across multiple projects, including reducing development time by 15% in the HawkGen app and improving GCS data load time by 15% through storage optimization.
- Enhanced data processing efficiency by optimizing MySQL-to-BigQuery queries (20% faster) and creating UX prototypes recognized among top submissions for innovation and usability.