

EDUCATION

Master of Science in Computer Engineering, **New York University** (09/2022 - 05/2024)

- Relevant Coursework: High-Performance Machine Learning, Digital Signal Processing, Machine Learning, Interactive Medical Robotics, Image and Video Processing.

Bachelor of Technology in Computer Science, **Gla University** (08/2018 - 07/2022)

- Relevant Coursework: Introduction to Machine Learning, Big Data, Digital Image Processing, Python Programming, Agile Software Development, Database Management.

WORK EXPERIENCE

Founding Machine Learning Engineer, Reslab AI (06/2024 - Present)

- Implemented customized local LLM instances for small businesses, optimizing response accuracy and data privacy while reducing dependency on cloud services

Machine Learning Intern, RadicalX (05/2023 - 08/2023)

- Led a team of 8 interns to design and deploy an LLM-based tutoring system.
- Developed and fine-tuned chatbots implementing Llama2 and GPT-4 for personalised course generation, resulting in a 30% reduction in response generation time and a 25% improvement in response coherence compared to baseline models.

Computer Vision Intern, KoiReader Technologies (05/2021 - 08/2021)

- Optimized OCR engine for 13.7% higher accuracy and 22% faster processing.
- Collaborated with cross-functional teams to deliver projects on time, conducted daily status updates with stakeholders, and identified potential roadblocks to mitigate risks.

Machine Learning Consultant, 360Medtech (01/2022 - 07/2022)

- Developed a machine learning model for oesophageal lesion detection in pill cam endoscopy for early cancer diagnosis.
- Implemented a bone segmentation algorithm for 3D prosthetic design, facilitating the creation of customized prosthetics.

SKILLS

Programming Languages: Python, Java, C++, JavaScript

Data Science and Machine Learning: PyTorch, Scikit-learn, TensorFlow, SQL, Pandas

Web Development: Django, NodeJS, React Native, SpringBoot

Cloud Computing & DevOps: AWS, Azure, Docker, Kubernetes

Data Analysis: MongoDB, MySQL, Tableau, Power BI

PROJECTS

Early Parkinson's Detection using deep learning([Publication](#))

- Reduced cross-examiner variability and time requirements by developing and validating a computer-aided diagnostic algorithm using **Python, TensorFlow, and Keras**.

Depression Detection in Social Media Users ([Publication](#))

- Achieved a precision and recall of 96.5% and 97.33% in identifying depressive symptoms in social media posts
- Designed and trained a hybrid Bi-LSTM + CNN model for NLP using Python, TensorFlow, and scikit-learn.

CityQ

- Led team of 3 to develop real-time NYC Citibike solution, analyzing 78M+ trips using FastAPI, MapReduce & Spark.
- Achieved 20% drop in predicted shortage with ML-driven dynamic pricing & scalable architecture for future expansion.

ReSeg

- Developed 3D human image segmentation with NYU Video Lab (2D segmentation & 2D - 3D reprojection) utilizing CUDA programming for efficient GPU acceleration
- Utilized 3d processing frameworks for creating diverse 2D projections, simulating lighting and camera properties.

Optimized Gemma2B for Real-Time Edge Translation

- Developed a real-time Hindi-to-Chinese translation system for resource-constrained edge devices using Gemma2B.
- Reduced Gemma2B model size by 40% through LoRA and pruning techniques, enabling efficient on-device execution while maintaining high translation accuracy (BLEU score).

LEADERSHIP

Graduate Orientation Leader (New York University)

Research Assistant (New York University)

Teaching Assistant (GLA University)

Diversity STEM Career Exploration Program cohort

Won S&P Global x AWS JAM

AWS Certified Cloud Practitioner (5/22 - 5/25)

