

Sai Shailesh Nanisetty

🏠 3701- 82 Dalhousie St, Toronto, ON M5B 0C5

📞 (437) 566-0979 🌐 [website](#) [linkedin](#) [github](#) ✉ [email](#)

EDUCATION

University of Toronto <i>Master of Science in Applied Computing (Artificial Intelligence)</i> <i>[Courses] Neural Networks & Deep Learning, Natural Language Processing, Visual and Mobile Computing, Computer Vision, Probabilistic Learning & Reasoning</i>	Sep 2023 - April 2025 GPA: 4.0/4.0
Indian Institute of Technology, Kharagpur <i>Dual Degree (B.Tech+M.Tech) in Industrial Engineering, Micro Specialization in AI</i> <i>Silver Awardee, Department Rank 2</i> <i>[Courses] Optimization & Heuristics, Data Structures & Algorithms, Probability, Multivariate Statistical Modelling, Foundations of ML</i>	July 2018 - May 2023 GPA: 8.65/10

WORK EXPERIENCE

Research Intern @ServiceNow <i>Python, LLMs, Prompt Engineering, Git</i>	Feb 2025 - Present
<ul style="list-style-type: none">Developed AgentAda, an innovative LLM-powered analytics agent that automates method selection for specialized insights.Architected a 3-part system integrating a question generator, RAG-based skill matcher & code generator to streamline data analysis.Created KAGGLEBENCH, a benchmarking tool of expert-curated notebooks to validate AgentAda’s analytical performance.Secured 48.78% human approval demonstrating AgentAda’s superiority over traditional methods with an LLM-as-a-judge strategy.Developing BigInsightBench - The 1st Global Benchmark for Multimodal Analytics to enhance LLM-driven decision making.	
ML Developer Intern @Synapsis Medical Technologies Inc. <i>Python, PyTorch, Tensorflow, React,Docker</i>	Aug 2024 - Feb 2025
<ul style="list-style-type: none">Developed a React app integrating 3 ML models to get real-time facial expressions, head poses and heart rates with a 75 ms latency.Designed SSL model leveraging contrastive learning with triplet loss to improve representation learning for the aforementioned modelsImplemented hard negative mining in triplet loss to enhance embedding separability, reducing facial emotion classification loss by 15%Pioneered a multimodal monitoring system to analyze interaction of emotional, physical & physiological states for tailored insights.	
Data Science Associate @Balyasny Asset Management <i>Python, PostgreSQL, Streamlit, Databricks</i>	May 2024 - Aug 2024
<ul style="list-style-type: none">Developed an Apache Airflow DAG for BAM Elevate, automating data population processes & improving workflow efficiency by 30%Structured multi-level datasets from investor & deal interaction feedback, enhancing analysis speed by 25%Optimized SQL queries for faster geographical expansion insights, reducing extraction & aggregation time by 40%.Developed dynamic Streamlit dashboards to analyze investor feedback & guide decisions on geographical expansions in real-time.	
Generative ML Intern @16 Bit Inc. <i>Python, PyTorch, HuggingFace, Transformers, Git</i>	Nov 2023 - Feb 2024
<ul style="list-style-type: none">Developed PaddleOCR-ViT model to extract patient details from DXA sheets, achieving 92 % accuracy on test set of 1200 samplesPerformed zero-shot & few-shot prompting on Llama2 7B & Zephyr 7B, achieving ROUGE-L score of 45.2 in report summarization.Fine-tuned models using PeFT-LoRA techniques enhancing contextual accuracy of report summaries with a ROUGE-L score of 48.3.	
Computer Vision Intern @Bharat Smart Services <i>Python, Tensorflow, Android Studio, Docker, Git</i>	May 2021 – Aug 2021
<ul style="list-style-type: none">Developed & deployed custom CNN models, achieving 91% accuracy on test set, to classify electric meters & extract readings using YOLOv5. Built an Android app for real-time electric meter reading & automated billing, streamlining the process for end-users.	

MAJOR PROJECTS

Prompt-GS: Segment Anything in 3D Gaussians with Multi-View Text Prompting link	Feb 2024 - May 2024
Collaborators: Kai Zhu, Lakshya Gupta, Anannya Popat, University of Toronto	
<ul style="list-style-type: none">Developed an enhanced 3D segmentation method by integrating Gaussian Splatting with prompt-based segmentation.Employed LangSAM for text-prompted object segmentation & DUST3R for efficient point-cloud initialization.Developed multi-view mask generation & label voting for accurate 3D object segmentation from sparse views.Achieved higher accuracy & IoU scores with 50 percent fewer views alongside cutting down compute requirements by 23%.	
TinyHR @University of Alberta link	Aug 2021 - Aug 2022
Collaborators: Preetam Anbukarasu, Ganesh Tata, Prof. Nilanjan Ray, University of Alberta	
<ul style="list-style-type: none">Built a hybrid FFNN-CNN pipeline that extracts heart rate from pressure data acquired on low-power ESP32 device.Wrote C++ Scripts for suitable deployment of implemented PyTorch models onto ESP32 edge device.Proposed method cuts energy and time inference by 82 % & 28 % compared to state of the art methods.	
Improvised sequential few-shot segmentation - UG Thesis @IIT KGP link	Dec 2021 - May 2022
Collaborators: Prof. KS Rao, IIT Kharagpur	
<ul style="list-style-type: none">Designed a Few-Shot CNN algorithm for segmenting low-labelled images by reducing perceptual bias.Incorporated set of Difference of Gaussians and bi-directional ConvLSTM algorithm in the framework.Performance measured in mean IOU shot up by 6.26 % & 1.2 % for 1 & 5 shot cases respectively.	

TECHNICAL SKILLS & CERTIFICATIONS

Languages: Python, C++, C, R, Matlab
Machine Learning: Transformers, PyTorch, JAX, Tensorflow, Keras, OpenCV, Hugging Face
Data Science: Pandas, Numpy, Scikit-Learn, Statsmodels, Scipy, Plotly, Seaborn, PySpark, Databricks, Microsoft Power BI
Database and Web Frameworks: SQL, PostgreSQL, MongoDB, React, NodeJS, FastAPI
Tools and OS: Docker, Heroku, Flask, Spark, Dask, Git, Linux, Ubuntu

ACHIEVEMENTS

- Awarded the MITACS Globalink Graduate Fellowship worth 15000 CAD to aid further research in Canada.
- One among 1190 students across the globe selected for the prestigious MITACS Global Research Internship.
- Winner of Smart India Hackathon, Government of India, 2020
- Achieved top 0.3 percentile in IIT-JEE examination, 2018 among 1.25 million candidates.