Rishi Dinesh

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Education

University of Toronto — M.Sc. in Applied Computing (AI Concentration) 2025 – Present
Coursework: Neural Networks & Deep Learning, Introduction to Causality

Vellore Institute of Technology, Chennai — B.Tech. in Computer Science (AI & ML Specialization) 2019 – 2023
CGPA: 9.51/10 • *Awards:* Department Rank 1, Gold Medalist

Work Experience

Signify (formerly Philips Lighting) – Bangalore, IN Jan 2023 – Jul 2025
Assistant Development Engineer, *Jul 2023 - Jul 2025*
R&D Intern, *Jan 2023 - Jul 2023*

- Designed the system architecture and implemented a **Retrieval Augmented Generation (RAG)-based chatbot, Bulbi**, for the Interact Pro system; adopted by **24,000+ users across 70+ countries**, cutting resolution time from 11 days to 7 seconds and saving **€30 per query**.
- Developed an in-house **agentic framework** for rapid creation and orchestration of **multi-agent systems**, featuring a modular and extensible design for intelligent assistants.
- Leveraged this framework to build a **conversational dashboard** that lets customers "talk to their lighting data," producing real-time insights and natural language-driven graph generation.
- Scaled Bulbi into a **multi-agent system** with built-in **planning, coordination, and human-in-the-loop (HITL) oversight** to automate system commissioning (multi-step setup and deployment) for Interact Pro, reducing setup time by **40%**.
- **Scrum Master** (Jul 2024 – Jul 2025): Facilitated Agile practices, leading daily stand-ups, sprint planning, and retrospectives to ensure timely delivery and continuous improvement.

Samsung PRISM – Online Jan 2022 – Sep 2022
R&D Intern

- Annotated a large **Tamil–English dataset** for language identification in code-switched texts, processing over **320,000 tokens** using a semi-automated approach.
- Trained and compared multiple ML and DL models, including transformer models like **BERT** and its variants, achieving an **F1 score of 95.56%** with **XLM-RoBERTa**.

Research & Publications

Nuclei Segmentation in Histopathology Images Using Structure-Preserving Color Normalization Based Ensemble Deep Learning Frameworks
Computers, Materials & Continua 77(3) — Prusty, M. R., *Dinesh, R.*, et al.

- Developed an ensemble of **U-Net architectures** with ResNet101, InceptionResNetV2, and DenseNet121 backbones, using stain normalization and test-time augmentation for nuclei segmentation in histopathology images, achieving an accuracy of **92.58%** on multi-organ and **96.69%** on single-organ datasets.

Leveraging Entity Pyramid-based Masked Sentence Pre-training and Graph Encodings for Multi-document Abstractive Summarization of Medical Literature Reviews
Final-year thesis project

- Developed a novel approach for **multi-document summarization** in medical literature by fine-tuning a **large language model (LLM)** on **graph-encoded medical studies**, achieving a **16.9% improvement in ΔEI-F1** and surpassing state-of-the-art benchmarks.

Skills

LLMs · RAG · Multi-Agent Systems · Transformers · PyTorch · Python · AWS · Git · Docker · Agile/Scrum