

Kalyana Abenanth Gurunathan

Edmonton , Alberta

+1(825)-975-1398 | kalyanaa@ualberta.ca | linkedin.com/in/kalyanaabenanthg

EDUCATION

University of Alberta

Master's in Electrical and Computer Engineering

GPA: 3.43

Edmonton , Canada

Sept 2024 - May 2026

EXPERIENCE

AppViewX

Engineer - Automation II , Development

Chennai, India

July 2021 - Aug 2024

- Led the data migration of legacy systems using kafka from MongoDB to SQL Server, which doubled application availability and significantly reduced operational costs.
- Built REST API's using the FastAPI framework for user input validation in the frontend forms, increasing the backend application success rate by 90%.
- Led Agile development of microservice applications to automate the creation and management of Virtual IPs and Wide IPs on F5 Big-IP using command-line tools and iControl APIs. Integrated Infoblox DNS with F5 devices for object creation, reducing manual effort and operational costs by 80%.
- Developed dynamic queue functionality for production workflows, increasing the overall success rate by 100%.

CERTIFICATIONS

Alberta Machine Intelligence Institute

September 2024 - Present

- I was selected to join the Amii AI Accelerator, a program focused on helping startups leverage artificial intelligence (AI) and machine learning (ML) to drive innovation. Through this program, I have access to mentorship, technical resources, and opportunities to explore how AI can enhance business strategies and solutions.

Smart India Hackathon 2020 Winners | Python,CV

September 2020

- Won the National Level Hackathon from MHRD, Government of India, competing against over 100k participants.

PROJECTS

Exploring Vision Models for Multimodal Interaction | Python,CV

September 2024 - Present

- Investigating the capabilities of vision-language models like LLaVA, focusing on multimodal chat, text and image content generation, and instruction-following for fine-tuning.
- Developing functionality for creating bounding boxes around regions of interest in images based on instructions.
- Exploring image composition techniques, enabling model-driven image editing.
- Conducting instruction fine-tuning with images using text data and annotated images, with plans to implement Supervised Fine-Tuning (SFT) for customized tasks.

Cisco ThingQbator | Python, Machine Learning, Firebase, MIT App

June 2021

- Developed a smart home automation system using machine learning algorithms to optimize daily appliance usage and predict power consumption.
- Built a mobile app interface to allow users to control and monitor appliances, reducing energy consumption.
- Created a unique machine learning solution to detect and prevent unnecessary energy wastage.
- Utilized Firebase (NoSQL) for data storage and processing.

TECHNICAL SKILLS

Programming Languages: Python, Rust , SQL , C++, HTML/CSS.

Machine Learning Frameworks: TensorFlow, PyTorch, Scikit-learn,OpenCV, NumPy,Pandas,Matplotlib.

Tools and Frameworks: AWS , RedHat Openshift , MongoDB , Apache Kafka , FastAPI , Docker , GIT , PowerBI , Kubernetes , Data Analytics , Agile SDLC, SSL/SSH , Venafi.

Networks and Cryptography: F5 LTM & GTM , Infoblox DNS , SSL Certificates Creation and Renewals , PKI.

Project Management: Jira , ServiceNow , Confluence.