

MINAL ACHARYA

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EDUCATION

Master of Science, Mobile and IoT Engineering, Carnegie Mellon University - INI Jan 2023 - May 2023
Bachelor of Engineering, Computer Engineering, University of Mumbai Aug 2016 - Oct 2020

SKILLS

Languages Proficient: Python, C, Shell Familiar: C++
ML Frameworks Keras, Tensorflow, PyTorch, Opencvino, HuggingFace, numpy, OpenCV, FAISS
Other Frameworks Postgres, MySql, Azure, Flask, CUDA, Redis, Git, Kafka

PROFESSIONAL EXPERIENCE

Engineer Oct 2024 - Present
Kawa Space Bengaluru, India

- Currently, building a ML system for estimating high resolution PM2.5 Emissions using satellite imagery.
- Optimized data engineering pipeline by implementing Kafka and caching mechanisms.

Lead Engineer - Founding Team Oct 2023 - September 2024
Rove Health Bengaluru, India

- Implemented fine-tuning pipelines over foundational models like medAlpaca and Mistral.
- Built multiple activity detection models with accelerometry data achieving, optimized for Arm Cortex M4.

Research Engineer Nov 2021 - Dec 2022
REConnect Energy Solutions Limited Bengaluru, India

- Deployed a scalable pipeline for load forecasting model on production with less than 7mins of downtime annually.
- Designed feature engineering and deep learning architectures for load forecasting, with an average MAPE of 3.8.

Jr. AI and IoT Engineer Nov 2020 - Oct 2021
Cynapto Technologies Mumbai, India

- Optimized image input received from RTSP Streams to efficiently run on low computational devices by x4.
- Integrated multiple images processing techniques to implement bad feed removal from input images, reducing computational load by 20%.

RESEARCH & INTERNSHIP EXPERIENCE

Research Assistant July 2023 - Sep 2023
Carnegie Mellon University - Catalyst Group Pittsburgh, US

- Researching efficient methods for fine-tuning LLMs to reduce computational load.
- Built training pipelines for experimenting Low Rank Adaptors and Mixture of Expert architecture of LLMs.

Intern May 2020 - Oct 2020
Cynapto Technologies Mumbai, India

- Ported windows based training-pipelines to linux servers, reducing 50% of computational resources.
- Wrote automation scripts of model training, error logging, data logging and memory cleaning.

PROJECTS & PUBLICATIONS

CargoCal - Built a tyre loading optimization application for Bridgestone Tyres by reducing travel trips for delivery.

Malloc - Implemented a segregated free list allocator to manage memory.

Scan.It - An OCR focused on improving accuracy of Tesseract library using image processing techniques, mainly for regional languages of India. The research done is published in IEEE Xplore Library.