Siddarth J Natarajan

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Work Experience

Generative AI Developer *Jun 2023 – Aug 2023*
SUGA Electronics Hong Kong

- Worked on 3 projects: Inventory Forecasting, Recommendation System, and Reverse image search engine.
- Developed and tested DeepAR model for Inventory forecasting. Simultaneously, developing a Matrix Factorization recommendation system using PyTorch, and ResNet/Deep CNN models for reverse image search.

Software Developer *Jun 2022 – Aug 2022*
HKUST ITSC Hong Kong

- Worked on two projects: HKUST Pathadvisor, and Facial recognition system
- Upgraded Pathadvisor application, and fixed 4 years of back-logged bugs (React-Native)
- Developed and tested Facial Recognition system (Python: Tensorflow, and Scikit-learn)

Head of Computer Vision *Jan 2021 – Sep 2022*
HKUST Robomaster Team Enterprize Hong Kong

- Led a team of 6 developers on two projects: Auto Aim system and Autonomous robot movement
- All developed using ROS in C++

Projects

Trading Strategy Project *2021*
COMP 4971C HKUST Course - Independant Study - Project Hong Kong

- Independent Study project with Professor David Rossiter
- Developed a trading strategy for FAANG+ stocks using semantic analysis of Reddit Posts and COVID-19 statistics analysis
- Back-tested with returns up to 250%

Consulting Project - AI Bond Dashboard *2023*
TEMG 4940C HKUST course - Winning Team - Leader - Team MVP Hong Kong

- Consulting for a Director of Commercial Banking, and a Director of Bond Trading
- Used novel Multivariate Time Series Graph Neural Network (MTGNN) to predict bond prices within 10 basis points, for 1 year ahead. Whilst, only using 10 days of data as input.

Human Face Deep Fakes Investigation *2022*
ELEC 4240 HKUST course - Deep Learning in Computer Vision - Project Hong Kong

- Investigated the effectiveness of Denonising Diffusion Probabilistic Models in Human Face generation
- Used YOLO model to help quantitatively and qualitatively evaluate results.

COVID-19 Case Flow prediction in Hong Kong *Aug 2021*
COMP 4222 HKUST course - Machine Learning with Structured Data - Project Hong Kong

- Developed our own Graph Neural Network Model to predict case flow of COVID-19 cases within Hong Kong
- Error rate within 5% when back-tested

Hackathons

2022 HackUST Finalist | sUSToken Team - Lead Developer *2022*
2023 Sino-One Million Semi-Finalist | Envoken Team - Lead Developer *2023*

Education

The Hong Kong University of Science and Technology *2020 - 2024*
Computer Engineering with a Minor in Robotics and Business Hong Kong

National University of Singapore *2023*
Exchange Programme Singapore

Languages & Skills

- English (Native)
- Tamil (Fluent)
- Mandarin (Limited)
- Python
- C++/C
- React Native & React
- Machine Learning
- App & Web Development
- Embedded Systems