

OBJECTIVE

- Highly motivated and a persistent learner aspiring to become an artificial intelligence engineer
- Passionate about developing Smart Robotics supporting healthcare professionals/patients & commercialized applications
- Acquired a strong background in the operations of global financial markets relevant to ETPs, FX and Digital Assets and therefore open to exciting opportunities in the field of financial technology

EDUCATION

MSc in Applied Computing

University of Toronto, Department of Computer Science

September 2022 – December 2023 (expected)

Courses (ongoing): Introduction to Machine Learning, Introduction to Mobile Robotics, Computational Imaging

Bachelor and Master of Technology

Indian Institute of Technology Bombay, Mechanical Engineering

August 2015 – August 2020

Minor in Electrical Engineering

EXPERIENCE

Flow Traders Asia Pte. Ltd

October 2020 – April 2022

Trading Operations Engineer

- Manage, maintain and optimize all internal, software and hardware stacks largely integrated with the Linux kernel
- Provide first-contact incident resolution to trading desks ensuring that their performance requirements are met
- Work with development to build and test exchange APIs for different APAC markets
- Implement automated ops-engines and relevant monitoring tools improving control and enabling streamlined deliveries

Research/Academic Projects

IIT Bombay

Capturing cutting tool failure in micro-milling

September 2019 – August 2020

- Developed a novel protocol and designed an experimental setup for micro-milling of non-linear slots
- Implemented an image processing pipeline to extract tool-wear data from captured tool images
- Modelled and tuned ANN and DBN to classify and predict tool-wear and end-of-tool-life based on force and vibration data

University of Toronto

October 2018 – December 2018

Autonomous Navigation and Obstacle Avoidance Robot

- Developed a pattern matching based depth first search (DFS) algorithm for self-localization of robot
- Enabled autonomous navigation through a pre-defined maze using OOP in C++ implemented on an Arduino Mega
- Optimized control parameters for PID control on a self-designed robot with custom assembly to enable obstacle avoidance

TECHNICAL SKILLS

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| • Programming Languages: | C/C++, Python, Bash |
| • Distributed Computing: | Hadoop, Disco, CUDA, OpenMP |
| • Data Streaming: | Elasticsearch, Kafka, Logstash, Filebeat |
| • Databases: | BigQuery, PostgreSQL, MariaDB |
| • Microservices and Cloud computing: | Kubernetes, Docker |
| • Machine learning: | TensorFlow, Keras |

PUBLICATIONS

Bagri, S., Manwar, A., Varghese, A., Mujumdar, S., & Joshi, S. S., "Tool wear and remaining useful life prediction in micro-milling along complex tool paths using neural networks", Journal of Manufacturing Processes, 71, 2021, 679–698