Michael Foo, MASc. P. Eng

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Education and Certifications

Simon Fraser University, Burnaby, BC September 2021 – December 2025

- Master of Applied Science (MASc) Program

Academic Awards**:**

- 2024 Summer Graduate Fellowship
- 2024 Fall Graduate Fellowship
- 2025 Spring GPS Graduate Fellowship

Simon Fraser University, Burnaby, BC September 2011– August 2016
Bachelor of Applied Science (BASc), Engineering, Systems option

Certified EGBC Professional Engineer (P. Eng)

Professional Summary

AI Robotics Engineer with 2 years of experience in robotics, computer vision and AI, and 5 years of experience in testing electronics communication devices. Proven ability to solve complex problems and to work cooperatively in a team.

Core Competencies and Technical Skills

Technical Experience and Skills

- Proficient in geometric robotics, with hands-on experience in implementing graphical reconstruction of humanoid using C# and Unity.
- Experience in using MediaPipe Pose (MPP) for accurate real-time human pose detection and tracking.
- Experience with using OpenCV with Python for developing real-time computer vision algorithms.
- Experience in developing deep learning framework (DL) for object detection.
- Hands-on experience building CNN models using TensorFlow/PyTorch for image classification tasks, including traffic signs and handwriting recognition.
- Experience in using MATLAB to build and train AI models for computer vision.
- Hands-on experience in implementing movement and obstacle avoidance algorithms on robotic platform using ROS, Arduino and LiDAR sensors.
- Hands-on experience with VHDL for RTL design and FPGA implementation.
- Experience in parallel programming with C on NVIDIA A100 GPUs and FPGA platforms.
- Highly proficient in programming in Python, C++, C#, C and MATLAB. Proficient in programming in TCL and ROS.
- Experience in using prototyping software such as AutoCAD, LTSpice, SolidWorks and Altium.

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- Expensive experience in validation testing of PCIe products and cellular devices.
- Experience with PCIe, cellular and Bluetooth protocols.
- Extensive experience in validating vehicle modems and test fixtures.
- Familiarity with I2C, SPI, UART, USB and SAS.

Other Skills

- Possesses good verbal and written communication skills.
- Has extensive experience in writing technical reports, user manuals and have completed multiple research papers including a graduate school thesis.
- Excels at working in team based environments and able to effectively collaborate with team members.
- Experience with basic NPI concepts such as BOM structures and factory process change notices.
- Familiarity with collaboration tools such as JIRA and Confluence.

Work Experience

Engineer II, Product Validation, Microchip Nov 2019 – Sep 2021

- Ran functionality tests on new products and firmware releases for SwitchTec PCIe switches.
- Ran, updated and validated various TCL scripts to test the system for various feature, functionality and use cases.
- Ported test scripts used to test previous generation of switches.
- Integrated various consumer electronics into internal test setups.
- Set up a range of desktop PC's, drives and servers to be used in test setups.
- Acquired experience in using PCIe protocol analyzers and interposers for debugging PCIe link issues.
- Acquired knowledge about PCIe standard configuration space (standard location of register headers, the purpose of each bit and the offset for each bit).

Jr Manufacturing Test Engineer, Sierra Wireless Sept 2016 – Nov 2019

- Created manufacturing test plans for full functional testing for new products.
- Developed and deployed test software coded in C++ to meet required test specifications for various products.
- Worked closely with New Products Introduction team (NPI) to identify, debug and rectify any manufacturing test shortfalls during production.
- Debugged various devices under test for electrical and RF functionality to determine potential hardware defects and provide detailed reports to the hardware team.
- Wrote necessary documents such as release notes, user guides, station wiring diagrams and work instructions for each software release for factory use.
- Validated manufacturing test fixtures for mechanical and electrical functionality and provide feedback to the Operations team.
- Went on site to test fixture vendor offices to validate and debug new fixture designs as well as provide basic training for using proprietary test software packages.
- Required to understand basic BOM structures in order verify that manufacturing test hardware and software used by the factory is current and up to date.
- Required to work with fixture manufacturers to verify fixture designs and provide necessary feedback.