Fernando Yee

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SKILLS & QUALIFICATIONS

- **Languages:** Python, Visual Basic, C++, C#, structured text, JavaScript, HTML, CSS, Java
- **Technologies:** Git, Arduino, Linux, networks, NodeJS, OpenCV, TensorFlow, Google Cloud
- **Experience:** Object-oriented programming, robotics, research and development, scripting, industrial automation

WORK EXPERIENCE

Software Developer, *ATS Automation*   *January 2019 – Present*
- Lead research and development to validate new technologies and processes for a high value project. Secured a conditional $20 million customer contract while also attracting other potential customers.
- Developed a suite of Python scripts to collect data, perform computations, and input training data into a machine learning model. Reduced amount of manual data entry by 80%.
- Created an algorithm to monitor curing status of blood testing kits in a multi-level drying chamber. Designed and implemented a queue for part tracking and a ranking system to determine best level to load parts onto.
- Regularly contributed feature changes and bugfixes to the codebase with a focus on structure and performance. Developed primarily with Python, Visual Basic, and C# for GUI and C++ and STL for embedded controllers.

Control Systems Software Designer, *ATS Automation*   *May 2018 – August 2018*
- Created control logic on a PLC to adjust lens focus on-the-fly for a laser welding system for electric vehicle batteries. Reduced amount of rejected parts by 50%.
- Developed a digital twin simulation of a machine used to refurbish reactor cores in nuclear power generation facilities. The simulation was used to train nuclear technicians prior to working on the real system.
- Worked with professional controls engineers to improve fault handling routines in the company code base.

Control Systems Software Designer, *Powerhouse Controls*   *September 2017 – December 2017*
- Created standard function blocks for the company code base to standardize code and encourage code reuse for common sensors and actuators used in industrial automation.
- Updated and maintained code generation scripts by addressing known bugs, improving code documentation, and integrating standard function blocks into the generation code.

Hardware Engineering Intern, *Danaher Corporation*   *January 2017 – April 2017*
- Developed embedded testing software on an Arduino for stress testing and performing accelerated life testing on products. Collected results and wrote engineering reports conforming to IEEE standards.

PROJECT EXPERIENCE

Python Finance Library, *https://pypi.org/project/pfinance/*   *February 2021 - Present*
- Contributed to open-source development of a Python financial mathematics library. Added core functionality, unit tests, GitHub Actions, and performed version releases.

EDUCATION

University of Waterloo, *Bachelor of Applied Science, Mechatronics Engineering*   *September 2015 – April 2020*
- Graduation with Distinction (3.70 GPA), President's Scholarship
- Formula SAE Motorsports Student Team, UW Electronic Music Production Club Mentor, Class Representative

The Odin Project   *May 2021 – Present*
- Enrolled in a comprehensive 1000-hour online course on web development. Learning HTML, CSS, JavaScript, and NodeJS.