# 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*                                                                  *May 2020 – 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, January 2019 – August 2019*
- 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 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.