

# CHRISTOPHER LIEM

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## EDUCATION

**Undergraduate of Electrical Engineering & Automation**  
**Tsinghua University, Beijing, China**

*June 2021*

## WORK EXPERIENCE

**Undergraduate Research Assistant - Intelligent Fault Detection and Health Assessment of Photovoltaic Systems | Tsinghua University, Beijing, China**

*Oct 2020 - Jun 2021*

- Designed, developed and verified a metaheuristic approach to create performance prediction models of photovoltaic systems in MATLAB
- Created an online fault monitoring implementation of photovoltaic systems using the XGBoost machine learning algorithm in Python
- Trained a neural network for fault detection in photovoltaic systems
- Established procedures for analyzing and interpreting simulation results

**Summer Internship | PT AIM, Semarang, Indonesia**

*August 2020*

- Designed and implemented a program on Python to automatically update inventory of raw materials, reducing time spent by 97%
- Completed periodic laboratory analysis and product quality assurance

**Summer Internship | WanTCom Inc, Chanhassen, MN, USA**

*Jun 2019 - Aug 2019*

- Trained in materials and components, industry standards, test equipment operation and product development and manufacturing procedures
- Monitored the electrical characteristics of various amplifiers from the assembly line to ensure acceptable quality standards
- Assembled a low noise amplifier for an existing customer and established a plan to test performance and verify adherence to electrical specifications

**Summer Internship | Tsinghua Sichuan Energy Internet Research Institute, Chengdu, China**

*August 2018*

- Collaborated with project members to successfully convert an analog rotameter to a digital version using Python and the Google AIY Vision Kit
- Decomposed an image processing problem and utilized MATLAB tools to independently develop an analytical solution

## SUMMARY OF SKILLS

**Programming** | Python, MATLAB, Java, C, Verilog HDL  
**Simulation Software** | AutoCAD, Solidworks, NI Multisim, Simulink  
**Languages** | English, Mandarin Chinese, Bahasa Indonesia

## PROJECTS

Designed a solar tracker in C using the MSP430 microcontroller

## CERTIFICATIONS

**Neural Networks and Deep Learning** by DeepLearning.AI  
**Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization** by DeepLearning.AI

*April 2021*

*July 2021*