

# Theodore Chiu

[theochiu.me@gmail.com](mailto:theochiu.me@gmail.com) | [theochiu.github.io](https://theochiu.github.io) | [linkedin.com/in/theochiu/](https://linkedin.com/in/theochiu/)

## SKILLS

- Software Development (Java, Python, C, C++, embedded C, Javascript)
  - Systems design: Digital circuits, embedded systems, systems integration, ASIC/FPGA design (SystemVerilog)
  - Data Analysis: classification, regression, clustering, dimension reduction, Bayesian probability
  - Machine Learning: Intermediate understanding of neural nets (Pytorch), Reinforcement learning (KerasRL) and Bayesian networks
  - Hardware engineering: PCB design(OrCad/PSpice, Eagle, kiCad), Soldering/Hot air rework
- 

## EXPERIENCE

### Luna Innovations

Blacksburg, VA

Systems Engineer II

2022 - Present

- Systems engineer in Lightwave Division supporting bleeding edge research of fiber optics by introducing new technologies and current engineering best practices to research team
- Reimplemented out of date software with scalable testing methodologies and modern frameworks
- Helped design software for fiber optic instruments that utilized Rayleigh backscatter OFDR (C++)
- Microsoft Hololens development for interactively displaying data (Unity & C#)
- Implemented software redesign to optimize an embedded system by offloading Fourier Transforms to DSP's (Embedded C)
- Created software using nonlinear optimization (Nelder-Mead) and frequency analysis to perform fabry-perot interferometry at industry leading speeds (Python/Numpy, C++)
- Performed data analysis to perfect EFPI Bragg grated pressure monitoring systems. Implemented high dimensional nonlinear regression to aid in data classification (C++, Intel oneAPI)

### Heroes Jobs

San Francisco, CA

CS Intern

Summer 2019

- Worked in an early stage startup as an intern leveraging software design and automation to optimize rapid growth in order to secure next round of funding
- Created libraries and scripts to automate social media presence that lead to an increase in user-acquisition
- Created internet scrapers to mine data from various databases to identify and target potential users
- Analyzed user characteristics and behaviors to identify trends in userbase

### Stanford Cognitive Systems and Neuroscience Lab – Stanford University

Palo Alto, CA

Intern

June – November 2016

- Worked in research lab environment as an intern to a post doctorate fellow assisting in research
  - Implemented scoring algorithm and optimized UI for screener game designed to help children with dyscalculia.
  - Collected and streamlined screener data for later analysis.
- 

## EDUCATION

Bachelor's Degree in Computer Engineering  
Purdue University, West Lafayette, IN

REFERENCE: Upon request