Theodore Chiu

[theochiu.me@gmail.com](mailto:theochiu.me@gmail.com) | [theochiu.github.io](https://theochiu.github.io/) | [linkedin.com/in/theochiu/](http://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](https://lunainc.com/) Blacksburg, VA

Systems Engineer 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* Reimplemented out of date software with scalable testing methodologies and modern frameworks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](https://www.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](http://med.stanford.edu/scsnl.html) – 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