

# CHRISTIAN SUN

chsun@seas.upenn.edu | linkedin.com/in/christian-sun | github.com/csun87

## EDUCATION

---

**University of Pennsylvania** | Philadelphia, PA May 2024

*B.S.E. in Computer Science | Minors in Data Science, Mathematics, and Music | GPA: 3.9/4.0 | ACT: 36/36*

**Relevant Coursework:** Discrete Mathematics (A+), Data Structures & Algorithms (A+), Big Data Analytics (A), Programming Languages & Techniques (A), Linear Algebra & Differential Equations (A+), Computer Architecture (A+)

## TECHNICAL SKILLS

---

**Languages:** Python, Java, Scala, JavaScript, HTML & CSS, C++, SQL, LaTeX

**Other Skills:** PostgreSQL, DynamoDB, AWS, React, Redux, Node.js, Swing, Linux, Git, Apache Spark, Airflow, PyTorch

## PROFESSIONAL EXPERIENCE

---

**Susquehanna International Group** | Trading Intern | Philadelphia, PA June 2023 – August 2023

- To be determined

**University of Pennsylvania CS Department** | Head Teaching Assistant | Philadelphia, PA January 2021 – Present

- Instructed 15+ students during weekly recitations, graded assignments/exams, and held weekly office hours
- Oversaw a staff of 35+ TAs and developed a curriculum to deeply analyze and implement data structures and algorithms

**Stripe** | Software Engineering Intern | Seattle, WA May 2022 – August 2022

- Restructured legacy Airflow data pipeline design in Scala to save Stripe over \$300,000 USD annually
- Prototyped new machine learning features which blocked over \$1,000,000 of fraudulent transactions each year

**Macmillan Learning** | Software Engineering Intern | Austin, TX May 2021 – August 2021

- Created an analytics site using React, Redux, Node.js, JavaScript, PostgreSQL, HTML, and CSS as a full stack developer
- Implemented an end-to-end solution with an API that extracted data from a PostgreSQL database based on queries
- Extracted various statistics from data and routed them to a React and Node.js front-end used by over 1,000 teachers globally

**JHU Applied Physics Laboratory** | Data Science/Machine Learning Intern | Laurel, MD Summers 2018 & 2019

- Designed agent-based models in Python to investigate the limits of current social science modeling techniques
- Modified the U-Net architecture to build a computer vision model to identify damaged buildings in satellite imagery using Python and the PyTorch deep learning library to accelerate humanitarian relief operations

## TECHNICAL PROJECTS

---

**PennBook** November 2021 – December 2021

*HTML, CSS, Node.js, Bootstrap, Spark, AWS DynamoDB, AWS EC2, AWS EMR*

- Built a miniature version of Facebook that allowed users to create accounts, make posts/comments, add friends, etc.
- Integrated Spark to do data analysis on users' interests and friends to provide news recommendations to them

**Short Term Reversal Stock Trading Bot** May 2021 – August 2021

*Python, Alpaca API, Requests, Backtester*

- Implemented a strategy for trading 100 largest stocks by market capitalization based on weekly performances in Python using the Alpaca REST API and HTTP requests to create trades
- Validated the success of the strategy by backtesting it on historical financial data

**Checkers with Minimax AI** November – December 2020

*Java, Java Swing, Java Abstract Window Toolkit*

- Programmed a single and/or multiplayer checkers game with a fully-featured GUI in Java using the Swing library
- Engineered a checkers AI using the minimax algorithm and implemented alpha-beta pruning to accelerate move selection