

# Jonathan Lee

jonatlee.com | 610.457.3996 | jonathanlee457@gmail.com

## EDUCATION

### UNIVERSITY OF PENNSYLVANIA MSE IN COMPUTER SCIENCE

Expected Grad: 2021 | Philadelphia, PA  
GPA: 3.93 / 4.0

**Relevant Coursework:** Applied Machine Learning, Software Foundations, Advanced Programming (Haskell), Big Data Analytics

### UNIVERSITY OF PENNSYLVANIA BSE IN COMPUTER SCIENCE

Expected Grad: 2021 | Philadelphia, PA  
GPA: 3.94 / 4.0

Minors in Mathematics and Economics

**Relevant Coursework:** Data Structures and Algorithms, Software Engineering and Design, Operating Systems, Linear Algebra, Discrete Math

#### Activities:

Penn Chamber Music (2019-2020)

Penn Symphony Orchestra (2017-2019)

Game Development (2018-2019)

## LINKS

GitHub:// [jonatlee](#)

LinkedIn:// [jonathanlee457](#)

## SKILLS

### PROGRAMMING LANGUAGES

Java • Python • Javascript

C • C++ • C# • CSS • OCaml

HTML • Haskell • Android • SQL

### SOFTWARE

React • React-Native • Redux • Chef.io

Jenkins • MongoDB • Git • Docker

Bazel

## VOLUNTEERING

• Volunteer at Food Bank of the Rockies (2019)

• Volunteer at Philabundance (2014-2017)

## AWARDS

• Dean's List (2017-2020)

• Inducted into Tau Beta Pi Honor Society (2020)

• Inducted into IEEE-HKN Honor Society (2019)

## EXPERIENCE

### MONGODB | SOFTWARE ENGINEERING INTERN (REMOTE)

Jun 2020 - Aug 2020

- Modified an internal Python CI test application to be offered as a service, streamlining the process for running the software on new projects
- Responsible for the redesign and migration of the existing code with a focus on stability, efficiency, and correctness
- Key features implemented: deployment as a Kubernetes cronjob, new concurrency model, robust unit test suite, use of Bazel for builds, and integration with Splunk for monitoring and alerting

### VISA | DEVOPS SOFTWARE ENGINEERING INTERN

May 2019 - Aug 2019 | Highlands Ranch, CO

- Supported an internal application built to increase efficiency of the server provisioning process (est. 700%)
- Performed benchmark testing on candidate data structures to store server information in MongoDB, additionally evaluating practicality of techniques such as hyper-threading and bulk writes in increasing efficiency
- Developed a Chef cookbook to automatically configure MongoDB settings across Linux servers in a replica set
- Wrote unit and integration tests to verify interactions with the database

### UNIVERSITY OF PENNSYLVANIA | PRIVATE TUTOR

Oct 2018 - Dec 2018 | Philadelphia, PA

- Tutored students in an accelerated introductory programming class, providing learning techniques and code excerpts to prepare students for exams and homework assignments

### EMONEY ADVISOR | SOFTWARE ENGINEERING INTERN

Jun 2018 - Aug 2018 | Radnor, PA

- Served as a full-stack developer on a web application for displaying market data (React / C#)

## PROJECTS

### CHIP8 EMULATOR

Apr 2020 - May 2020

Lightweight emulator for the CHIP8 language developed in C++, completed as a group project. Implemented the processor logic.

### PENNOS

Oct 2019 - Dec 2019

Unix-like operating system built from scratch in C, completed as a group project. Worked on writing the kernel-level logic.

### SPLITME

Jun 2019 - Dec 2019

Mobile group payment application built alongside peers. Led front-end development using React-Native and Redux.

### PREDICTING NBA OUTCOMES USING MACHINE LEARNING

Oct 2018 - Dec 2018

Implemented a ranking algorithm to predict NBA (National Basketball Association) team rankings on raw team statistics, ignoring win-loss records and ratios. Used Python's scikit-learn ML library.