Eric Chen

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EDUCATION

- **Swarthmore College** — Swarthmore, PA
  B.S. Computer Science, B.A. English Literature, Engineering minor. GPA: 3.9/4.0 — *Sept. 2016 - May 2020*
  - **Relevant Coursework**: Algorithms, Operating Systems, Software Engineering, Introduction to Computer Systems, Mobile Robotics, Design of Digital and Embedded Systems, Computer Engineering Fundamentals
  - **Accolades**: 2018 Perdue Award winner: most outstanding junior engineer at Swarthmore College, awarded by Engineering faculty

EXPERIENCE

- **Uptime Solutions** — Hanover, NH
  Software Engineering Intern — *June 2019 - Aug. 2019*
  - Maintained software in Python and C# controlling multithreaded collection and processing of thousands of channels of vibration data measured on industrial equipment
  - Maximized utilization of hardware through rewriting data collection component
  - Eliminated a bottleneck in development by proposing and implementing a fundamental change in the representation of channels in the database, collection, and processing components
  - Introduced extensive unit testing and documentation into data collection component, increasing modularity and robustness of software
  - Wrote script to automate network optimization of 4000+ data collection hardware units at a plant of the largest paper company in the world

- **InfraClear** — Swarthmore, PA
  Analyst — *May 2018 - Aug. 2018*
  - Worked with infrastructure industry expert to create minimum viable product for a technology transforming the cumbersome process of infrastructure contracting
  - Analyzed infrastructure contracts, identifying common issues of interest to their financers
  - Drafted and refined search queries to reliably extract passages in contracts relevant to these issues
  - Designed a straightforward and intuitive user experience for the end product

PROJECTS

- **Study Map**
  A location-based web application for tracking and coordinating studying at Swarthmore College
  - Built application using Python, Flask, SQL
  - Researched and evaluated multiple maps APIs before using TomTom's
  - Devised database schema for storing study locations, posts, and user information
  - Wrote view functions to display login-protected pages

- **Various Linux Projects**
  All written in C, interacting with the Linux kernel directly or from userspace
  - Implemented shell program and accompanying parser capable of command execution, inter-process communication (pipes), I/O redirection, and command history
  - Modified Linux kernel to add custom system calls and an implementation of a synchronization primitive
  - Built a modular device driver for a virtual "mailbox" device
  - Implemented an auxiliary file-system, managing inodes for files and directories with direct and singly-indirect data blocks

SKILLS

- **Languages and Technologies**: Python, C++, C#, C, MATLAB, HTML, Git, SQL