JEFF CHEN

EDUCATION

2012-2016 **Carnegie Mellon University Class of 2016** - B.S. Computer Science

- Expected minors in Human-Computer Interaction and Robotics
- Relevant coursework - Introduction to Computer Systems, Parallel and Sequential Data Structures and Algorithms, Great Theoretical Ideas in Computer Science, Science of the Web, Human-Robot Interaction, Cognitive Robotics, Humanoids

EXPERIENCE

Summer 2013 **Stokes Scholar**, *National Security Agency*

- Held TS//SI clearance since 2012
- Wrote tool to detect and neutralize Windows malware using infection markers
  - Enabled lightweight, fast, and accurate detection of known malware
  - Neutralized malware by taking control of known infection markers
  - Applied heuristic analysis to potential infection markers with success rate comparable to commercial antivirus software
- Created tool that displays a two-dimensional overview of network activity for intuitive analysis

2010-2012 **Software Lead**, *AUVSI RoboSub*

- Wrote and maintained software for an autonomous submarine
  - Implemented computer vision algorithms, including image segmentation, blob detection, and line detection
  - Wrote PID controller and Kalman filter for accurate motion through potentially turbulent water
  - Managed large codebase and over ten developers with Git
- Taught novice programmers object-oriented programming and C++

PROJECTS AND AWARDS

Februrary 2014 Created **MiniPlay**, a Chrome extension to operate Google Play Music and add features like global shortcuts and Last.fm scrobbling. Has over 100 daily users.

January 2014 Built a **threadpool** in modern C++11 to fill the gap in the C++ standard library between `std::async` and `std::thread`.

April 2013 Wrote **Skein**, a high-performance Skein-1024 brute forcer for the xkcd Alma Mater challenge that out-performed the vast majority of schools including Cornell, and coming only twenty bits short from the winner, a group of CMU students using a supercomputer.

December 2012 Wrote a virtual machine in C, designed to interpret and execute bytecode in C0 as a final project for 15-122.

September 2012 At the Fall 2012 PennApps hackathon, developed **Chroma**, an Android application designed to help colorblind people distinguish between the entire color spectrum

October 2011 Finalist for the **CSAW High School Cyber Forensics Challenge**

SKILLS

Languages C++, C, Java, Javascript, Python, SML, x86 assembly

Web CSS, HTML, Node.js

APIs WinAPI, NTAPI, OpenCV, POSIX

Other Bash, Git, Markdown, LaTeX, CMD, GDB

7622 Ridgeline Drive - Dublin CA 94568
jeffrey@cmu.edu • +1 (925) 699 5663 • jeff.yt