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

2013-2014 **Stokes Scholar**, *National Security Agency*

- Held TS//SI clearance since 2012
- Summer 2013
    - Wrote tool to detect and neutralize Windows malware using infection markers
        - Enabled lightweight, fast, and accurate detection and neutralization of known malware
        - Applied heuristic analysis to potential infection markers with success rate comparable to commercial antivirus software
- Summer 2014
    - Did some stuff relating to this other stuff
        - It was done in this language
        - It was pretty fucking awesome
        - Here's another bullet point

2010-2012 **Lead Developer**, *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 turbulent water
- Taught novice programmers object-oriented programming and C++

PROJECTS

July 2014 Wrote **Ties**, an Android application that helps people stay in touch.

April 2014 Implemented **computer stereo vision** in OpenCV using semi-global block matching.

Februrary 2014 Created **MiniPlay**, a Chrome extension to operate Google Play Music and add features like global shortcuts and Last.fm scrobbling. Has over 300 daily users.

August 2013 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 brute forcer to crack aa Skein-1024 hash. In the xkcd Alma Mater challenge (listed as laspositascollege.edu), out-performed the efforts of entire universities, including Cornell and LSU.

December 2012 Wrote a virtual machine designed to interpret and execute `C0` bytecode as a final project.

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

SKILLS

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

Web CSS, HTML, Node.js

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

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