JEFF CHEN

EDUCATION

2012-2016 CARNEGIE MELLON CLASS OF 2016 — *B.S. COMPUTER SCIENCE*

- Expected minors in Human-Computer Interaction and Robotics
- Relevant coursework: Algorithm Design and Analysis, Cloud Computing, Cognitive Robotics, Complexity Theory, Human-Robot Interaction, Interaction Design Overview, Science of the Web

EXPERIENCE

2012-2014 NATIONAL SECURITY AGENCY — *STOKES SCHOLAR*

- Held TS//SI clearance since 2012
- Developed Windows anti-malware software
  - Used infection markers to enable 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
- Designed and developed CNE operations tool for collection of computer-to-computer communications
- Designed and implemented secure communications protocol

2010-2012 AUVSI ROBOSUB — *LEAD DEVELOPER*

- 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 concepts using 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.

Feb 2014 Created MiniPlay, a Chrome extension adding features to Google Play Music with over 400 daily users.

Aug 2013 Built a high-performance 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 a Skein-1024 hash for the xkcd Alma Mater challenge, out-performing the efforts of entire universities, including Cornell and LSU.

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

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

CONTACT

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CODE

C++	Python
C	SML
Java	x86
Javascript	Android
MongoDB	

WEB

CSS	LESS
HTML	Node.js
jQuery	Socket.IO

OTHER

Bash	LaTeX
Git	CMD
Markdown	GDB