Jeff Chen

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🎓 Education

Carnegie Mellon Class of 2016 — *B.S. Computer Science* — 3.4/4.0

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

💼 Experience

National Security Agency — *Stokes Scholar*

Holder of TS//SCI clearance with special background investigation and polygraph

Summer 2013	Remote & Deployed Operations

- Developed Windows anti-malware software
  - Used infection markers to enable lightweight, fast, and accurate detection and neutralization of known malware
  - Heuristically analyzed and tagged potential infection markers
- Created an intuitive network traffic visualizer, allowing analysts to more easily notice anomalous behavior

Summer 2014	Data Network Technologies

- Designed and developed CNE operations tool for collection of computer-to-computer communications
- Designed and implemented secure communications protocol

Summer 2015	Trusted Systems

- Designed and implemented a software keyboard for Android devices that operates in the TrustZone secure environment
- Ported IMA (Integrity Measurement Architecture) to Android
  - Partially implemented the Trusted Platform Module (TPM) standard in the TrustZone secure environment
  - Developed a kernel driver to interface with the software TPM
  - Created TrustZone secure application to sign and certify the IMA measurement list
  - Created a system service enabling Android remote attestation

</> Projects

April 2015	Created espresso, a deep learning framework designed to produce maintainable yet highly performant code compatible with Caffe.
July 2014	Wrote Ties, an Android application that helps people stay in touch.
April 2014	Implemented computer stereo vision using semi-global block matching.
Feb 2014	Created MiniPlay, a Chrome extension for web music players with over 500 daily users.
Aug 2013	Built a dynamic threadpool in modern C++11 to fill the gap in the C++ STL between `std::async` and `std::thread`.
April 2013	Wrote a high-performance Skein-1024 (SHA-3 candidate) hash cracker for the xkcd Alma Mater challenge.
Sept 2012	Developed Chroma, an Android application designed to help colorblind people distinguish between the entire color spectrum.
2010-2012	Led development of eva, software for an autonomous submarine, including computer vision, state machines, and control systems.

⌨ Languages

C++14
C
Java
Javascript
Python
x86
Rust

⑂ Technologies

Cryptosystem design
*nix kernel development
OpenMP/Open MPI
SIMD
CUDA/OpenCL
OpenCV
Embedded systems

☁ Internet

HTML
SASS/CSS
Angular.js
Node.js
Socket.IO
jQuery
MongoDB