Andy Gu

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EDUCATION

University of Southern California, Los Angeles, CA — *Graduates May 2018*
Bachelor of Science in Computer Science and Computer Engineering
Minor: Applied Computer Security
GPA: 4.00
Courses: Linear Algebra and Linear Differential Equations, Data Structures and Object Oriented Programming, Discrete Methods in Computer Science, Introduction to Embedded Systems, Principles of Physics
Complete by December 2015: Foundations of Digital System Design, Introduction to Algorithms and the Theory of Computing, Principles of Software Development

Graduate – Top 10 Ranked Student (GPA: 3.99, 4.61 Weighted) — *May 2014*
Saint Francis High School, Mountain View, California
National AP Scholar – AP Calculus AB, AP Calculus BC, AP Statistics

SKILLS AND EXPERIENCE

Programming Languages: C, C++, Python, SQL
Passing Experience: HTML, CSS, Javascript
Microsoft Office: Advanced
Hardware Design: Arduino Uno

Los Alamos National Lab, Cyber Futures Lab, Los Alamos, NM, Research Intern — *May 2015-August 2015*

- Manipulated DNS, Squid, and netflow logs, created python analytical tools to measure organizational sensitivity in MySQL queries from LANL incident response teams and independent researchers
- Used tools in Wireshark, Scapy, and pysqlite3 to implement query analysis for safer academic data-sharing and researched challenges in modern privacy algorithms
- Developed an algebra for determining organizational privacy risk for data queries and wrote estimators of relative costs of SQL queries. Experimented with differential privacy and prefix-preserving anonymization implementations across multiple datatypes.
- Working as a research intern under Dr. Boris Gelfand and the RetroFuture project

Analysis of Network Traffic Lab, Information Sciences Institute, Marina Del Rey, CA, Research Intern — *September 2014-Present*

- Wrote Python scripts to automatically generate charts using the Matplotlib library given data from edge network probing
- Wrote interactive Javascript websites mapping outage geolocations over multiple 24-hour time periods and parsing probe results
- Read Perl code and wrote equivalent Python scripts to parse probe results of /24 blocks of the Internet
- Helped researchers perform Internet measurement and analysis to better facilitate outage detection
- Worked as a research intern under Dr. John Heidemann while keeping a log of weekly progress

University of Southern California, Introduction to Computing Course, Course Grader — *January 2015-Present*

- Selected as a course grader based on academic and course performance in first semester courses. Graded midterms, homework, and project essays while checking for plagiarism during the semester.

PROJECTS

Death Clock

- Created a Halloween-themed Android application at the 2014 TrojanHacks Hackathon – it took in behavioral data and displayed average life expectancy based on lifestyle choices chosen from a drop-down menu. Won 4th place out of 18 teams.
- Learned basic Android programming principles to personally create a screen that returned and processed the results of these data.

My(o) Cookbook

- Wrote a dynamic recipe using the Myo API to detect stirring and chopping gestures to progress through a digital cookbook for users.
- Independently learned the Javascript interface / myo.js library to track basic cooking gestures. Won best Myo hack at LA Hacks 2015.

HONORS/ACCOMPLISHMENTS

- Trojan Scholar Society and National Society of Collegiate Scholars, Member – 2014
- IBM Watson Memorial Scholarship Recipient, Presidential Scholarship Recipient – 2014
- W.V.T. Rusch Engineering Honors Program Member – 2014
- Viterbi School of Engineering Deans List – Spring 2015