

Education

National Taiwan University

B.S. in Electrical Engineering and Finance

Overall GPA: 4.19/4.3 Major GPA: 4.19/4.3(EE) 4.18/4.3(Finance)

Overall Ranking: 9/249(4%)

Jan. 2017
Taipei, Taiwan

Coursework related to Computer Science:

- Computer Programming / Introduction to Computer / Operating Systems
- Computer Architecture / Algorithms / Data Structures and Programming
- Discrete Math / Probability and Statistics / Linear Algebra
- Introduction to Wireless and Mobile Networking / Intelligent Devices and Cloud Computing
- Computer Security / Special Topics in Computer Security

Honors

Pan Wen Yuan Scholarship

Pan Wen Yuan Foundation

Sep. 2013

Awarded to 3 distinguished undergraduate students of College of EECS, NTU each year.

Dean's List

Department of Electrical Engineering, NTU

Fall 2012, Spring 2013, Spring 2015

Awarded to top 5% students of department each semester.

Selected Coursework

Special Topics in Computer Security

Spring 2016

- Developed advanced skills in exploiting executable binaries.
- Demonstrate possible exploit regarding CVE-2016-4024 as final project.
(Final Presentation Slides: <https://goo.gl/xOU8VH>)

Electrical Engineering Lab (Embedded Systems)

Fall 2015

- Interact with embedded prototyping systems(e.g. Tessel) and build middleware for custom I/O devices.
- Built Naviskate, a smart skateboard prototype integrating navigation into skateboards.
(Demo Video(Chinese): <https://goo.gl/WNjM4d>)

Computer Security

Fall 2015

- A cross-university course that allows us to obtain knowledge of security issues in multiple fields such as binaries, web, cryptography etc.
- Our team finished 10th place out of 68 teams in the CTF opened to public held as final term.
(Final Scoreboard: <http://bit.ly/2cQDXxp>, Team q86)

Research and Patents

Fast Crypto Lab, NTUEE

Fall 2015 - Spring 2016

Undergraduate Research

- Reproduced attack in paper¹ on MIFARE classic cards based on design flaws in Crypto-1 with C++.
- Used multiple methods to reduce complexity from 2^{48} to $2^{33.7}$.

Security Team, China Development Lab, IBM Taiwan

Jul. 2015 - Jan. 2016

Patent Inventor

- US Patent: Seamless Abort and Reinstatement of TLS Session (IBM Docket No. TW920160011US1)
- Co-invented method allowing passive inspectors to transparently handle existing TLS connections with resumption.

Wireless and Mobile Network Lab, NTUEE

Spring 2015

Undergraduate Research

- Analyzed wireless networking models with game theory and other optimization methods(e.g. Dual Analysis, Lyapunov Stability).
- Formulated user association model of LTE/LTE-U spectrum with multiple UEs

¹Carlo Meijer and Roel Verdult. "Ciphertext-only Cryptanalysis on Hardened Mifare Classic Cards". 22nd ACM SIGSAC Conference on Computer and Communications Security. CCS '15

Work Experience

Aidmics Biotechnology

Aug. 2016 - Present

Web Developer

Taipei, Taiwan

- Maintain product website and optimize web page delivery performance with node.js and postgresSQL.
- Integrate user-tracking with Facebook Business and Google Analytics and payment with Paypal API.

Security Team, China Development Lab, IBM Taiwan

Jul. 2015 - Jan. 2016

Software Intern

Taipei, Taiwan

- Developed proof of concept for intrusion protection system cloud service with node.js and iptables on self-hosted Cloud Foundry instance and multi-tenant Openstack environment.
- Demonstrate possibility and performance of packet inspection with Netfilter/NFQUEUE inside Docker containers by implementing daemons written in C.
- Inventor of US patent regarding intrusion protection for connections with TLS resumption.

Bonio Inc.

Jul. 2014 - Sep. 2014

Fullstack Web Developer Intern

Taipei, Taiwan

- Developed game prototype for project management training using Ruby on Rails.
- Deployed Scrum in project team as the agile software development framework.

Projects

Courspeek

Jun. 2015

- Implemented web page scraper to parse classroom reservations and obtain course data for the following semester with Javascript.
- Built web application that served ~100 students simultaneously, allowing them to search courses before officially released with node.js, React.js and mongodb.

NTU Grade Distribution Viewer

Jan. 2014

- Fetched course grading distribution from obscure endpoint of university website with JQuery.
- Packaged service into Chrome browser extension and provided it to university students.

NTUEE Week Campaign Website

Oct. 2013

- Built web application for student association-held activity "NTUEE Week" with several games and currency system with PHP and CodeIgniter framework.
- First ever approach in the school for similar events, hosted ~1000 users in the 2-week online campaign.

Extra-Curricular Activities

HackNTU

Oct. 2014 - Jul. 2015

Director of Community & Club Leader

- Organized a total of 5 workshops and meetups with a target audience of non-tech background students, introducing them to topics such as web design, hardware hacking and data science.
- Managed and coordinated 4 semester-wide courses held by the club collaborating with instructors from IT industry covering subjects such as IoT and mobile apps.

NTUEE Student Association

Sep. 2014 - Aug. 2015

Chief Information Officer

- Developed and maintained textbook purchasing system that was used by students from 4 departments. The system was developed with Ruby on Rails.
- Establish and managed Linux server used by student association.

NTU Securities Research Society

Nov. 2013 - Feb. 2015

Director of Marketing

- Improved exposure and attendance of events by managing social media with advertising campaigns.
- Organized and promoted camps for 50 participants from general public to gain knowledge on securities and financial markets.