

## Education

**Georgia Institute of Technology, M.S. Computer Science '19** Machine Learning specialization  
**Coursework:** Advanced Computer Vision, Machine Learning Theory, Probabilistic Graphical Models, Programming Languages  
**Research:** Interactive Deep Learning Classification (CVPR demo): Prof. Polo Chau, Visualizing Adversarial Attacks: Prof. James Hays  
**University of Southern California** August 2017  
**B.S. Computer Science & Business Administration**, cybersecurity specialization GPA 3.4  
**Coursera:** Data Mining Specialization, deeplearning.ai, Internet of Things & Arduino, Android & Gradle, PGM, AngularJS, Swift

## Work

**Tencent • Youtu Lab • ML Algorithms** Winter 2017  
*Deep Learning Research Intern* Shenzhen, China  
> Evaluated RCNN, FPN, one-stage object detectors under Prof. Jiaya Jia's AI group & ablation study on speed/accuracy tradeoffs  
**Apple • macOS Performance** Summer 2016  
*Software Engineering Intern* Cupertino, CA  
> Designed ObjC instrument tool to derive bottleneck processes in user workflow from automated analysis of OS kernel logs  
**NASA JPL • Collaborative Engineering Model Visualization • Senior Capstone** Spring 2017  
*Tech Lead* Los Angeles, CA  
> Architected modular VR platform tracking biosensor input (IMU,EMG,IR) to drive real-time, cross-device collab via UnityVR  
**Reelio (Fullscreen Media) • PennApps Fellows** Summer 2017  
*Backend Development Intern* Philadelphia, PA  
> Browser automation + refactored Django REST, API unit tests & C.I. with CircleCI. Ran agile SDLC methodologies w/ JIRA  
**USC Viterbi School of Engineering • Department of Computer Science** Fall 2016  
*Undergraduate Teaching Assistant • CSCI-201: Principles of Software Development* Los Angeles, CA  
**IBM • Global Services** Summer 2014  
*Project Assistant Intern* Beijing, China  
> Managed user acceptance testing and researched client supply chain to define ERP procurement workflow in JavaFX GUI

## Competitions

**Facebook HQ Global Hackathon Finals • 3<sup>rd</sup> Place** November 2017  
> Built VR unconscious bias training scenes with Speech-to-Text input for implicit bias-busting and sentiment analysis with LSTM  
**Stanford TreeHacks • Facebook's Choice, Amazon Best Alexa Voice Experience, Best Data Visualization** Feb 2017  
> Pioneered conversational food intake tracking intelligence with real time visualization of calorie breakdown and meal suggestions  
> Prototyped IoT bottle to log water consumption to AWS using ultrasonic sensor for water levels & color sensor for fluid detection  
**UCLA IDEA Hacks • 3<sup>rd</sup> Place by IEEE, Atmel** January 2016  
> Implemented spatially-aware (Wi-Fi RSSI) audio mechanics extension that modulates synchronized speakers' volume using bitwise Pulse Width Modulation based on user proximity (dBm to distance) to modular, Arduino-connected speakers  
**UCLA LA Hacks • Top 10, Runner-up: LA Olympic 2024** May 2016  
> Architected iOS app connecting Microsoft band & Arduino BLE to visualize HR heatmap of sports game attendees via LED  
**UMich MHacks 6 • Best overall Microsoft Hack** September 2015  
> Trained Kinect sensor with HAAR classifiers to recognize objects+depth data for Arduino controlled haptic navigational feedback

## Research

**Publication** • "Interactive Classification for Deep Learning Interpretation", IEEE CVPR 2018 (Demo). Cabrera et al.  
**Papers** > "Two-stage vs. One-stage detectors: State-of-the-art Detection and Tracking", in progress. 2018.  
> "Network Virtualization: Distributed Computing and a more secure Internet", a survey. 2016.  
> "Quantum Computing and its effects on Deciphering Public Key Cryptosystems", a survey. 2015.  
**Campus** • Orientation Advisor, ITS Computer Consultant, USC Consulting Club, ACM, USC 3DPrinting4E, Alexa Prize  
**Leadership** • CS Teaching Assistant, Head of Development@Coding School, PwC Elevate SLP, USC Emerging Leaders

## Skills

**Proficient:** C/C++, Java, Python, MATLAB, Objective-C, Android, Arduino, JavaScript, UNIX, Django, MySQL, LaTeX  
**Learning:** Caffe, TensorFlow, PyTorch, ReactJS, CUDA **Experience:** VR/AR, Docker, OpenCV, Unity, D3.js, C#, NoSQL