

# Xander Koo

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<https://xanderk.ooo>

Ph.D. Student in Human-Centered Computing at Georgia Tech

## Areas of Interest

Social Computing · Social Media · Politics · Labor Organizing

## Education

**Aug 2022 – present**

Ph.D. in Human-Centered Computing  
Georgia Institute of Technology | Atlanta, GA  
Advised by Dr. Amy Bruckman | GPA: 4.0

Aug 2017 – Dec 2021

Bachelor of Arts  
Pomona College | Claremont, CA  
Major in Computer Science, Minor in Asian Studies | *Summa cum laude* | GPA: 3.99

## Research

**Aug 2022 – present**

Graduate Research Assistant  
School of Interactive Computing, Georgia Tech | Atlanta, GA

May 2020 – Dec 2021

Research Assistant  
Department of Computer Science, Pomona College | Claremont, CA

- Conducted HCI/computer vision research on WebGazer, a webcam gaze prediction app, under Dr. Alexandra Papoutsaki
- Created data collection/analysis pipeline for remote user study in ongoing collaboration with University of Central Florida.
- Integrated TensorFlow.js Facemesh face tracking; added IndexedDB browser cache; built prediction accuracy test suite in JS

May 2021 – Aug 2021

Visiting Research Assistant  
Brown HCI Lab, Brown University | Providence, RI (remote)

- Continued development of a robust error testing pipeline for gaze prediction accuracy on Brown HCI's WebGazer
- Integrated Google MediaPipe for biometrics on Portal-ble, a mobile AR environment in Unity, working with Jing Qian

Jul 2019 – Aug 2019

Summer Research Intern  
IoX Center, National Taiwan University | Taipei, Taiwan

- Worked on 2 new VR haptic accessories, FrictShoes and GuideBand, latter was accepted to CHI 2021
- Built Arduino comparison prototype for vibrotactile arm guidance (Aggravi et al., 2016) and VR test scenarios in Unity/C#
- Won 2nd place award in IoX Center Summer Research Program under Dr. Hsin-Ruey Tsai and Dr. Robin Bing-Yu Chen

May 2019 – Jul 2019

Undergraduate Research Intern  
Kōgakuin University | Tokyo, Japan

- Implemented live camera object detection with TensorFlow in Python, on a Raspberry Pi that communicates with linked microcontrollers (GR-PEACH) via I2C protocol for a microcontroller-based path guidance robots

May 2018 – Aug 2018

Research Assistant  
Stanford University Asia-Pacific Research Center | Stanford, CA

- Researched electoral malfeasance, Taiwan's Central Election Commission, and indigenous land rights w/ Dr. Kharis Templeman

## Publications

2021 H. Tsai, Y. Chang, T. Wei, C. Tsao, X. Koo, H. Wang, B. Chen. [GuideBand: Intuitive 3D Multilevel Force Guidance on a Wristband in Virtual Reality](#). In *CHI Conference on Human Factors in Computing Systems (CHI '21)*, May 2021, Yokohama, Japan.

# Teaching

## Teaching Assistantship

Fall 2019	CS 62: Data Structures and Advanced Programming Instructor: Dr. Alexandra Papoutsaki   Department of Computer Science, Pomona College
Spring 2019	CS 62: Data Structures and Advanced Programming Instructor: Dr. William Devanny   Department of Computer Science, Pomona College
Fall 2018	CS 51: Introduction to Computer Science, Java Instructor: Dr. Yuqing Melanie Wu   Department of Computer Science, Pomona College

## Professional

May 2021 – Aug 2021	Software Developer Intern IBM Cloud Key Protect   Austin, TX (remote) <ul style="list-style-type: none"><li>• Built Slack bot to aid Key Protect developers by automating daily compliance tasks, now used daily by 50+ developers</li><li>• Collected feedback from and met with developers to iteratively polish bot design/functionality before launch</li><li>• Implemented regional service instance control functionality with Golang and PostgreSQL for Key Protect clients</li></ul>
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## Leadership

Sep 2018 – Dec 2021	5C Freestylin' Collective Claremont Colleges   Claremont, CA <ul style="list-style-type: none"><li>• Officer (Jan 2018 – May 2020)</li><li>• President (Jan 2021 – Dec 2021)</li></ul>
Sep 2018 – Dec 2021	Taiwanese American Student Association Claremont Colleges   Claremont, CA <ul style="list-style-type: none"><li>• Events Coordinator (Sep 2018 – Sep 2019)</li><li>• Co-President (Sep 2019 – May 2020)</li><li>• Vice President (Jan 2021 – Dec 2021)</li></ul>

## Honors

2022	Alternate Candidate, Fulbright U.S. Student Scholarship (Japan)
2020	Inductee, Phi Beta Kappa Society
2020 – 2021	Tapia Conference Scholar
2017 – 2021	Pomona Scholar Award (awarded for 7 semesters)

## Skills

### Programming

JavaScript · Java · Python · Golang · C# · C++

### Other

Git · Bash · HTML/CSS · LaTeX · Unity · PostgreSQL · Tensorflow · Raspberry Pi · Arduino

## Languages

English · Mandarin Chinese (bilingual fluency) · Japanese (professional proficiency)