

# Xander Koo

[firstname AT gatech DOT edu](mailto:firstname AT gatech DOT edu)  
<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

Aug 2017 – Dec 2021

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

## Research

**Aug 2022 – present**

Graduate Research Assistant  
School of Interactive Computing, Georgia Institute of Technology, 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  
National Taiwan University IoX Center, 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, & 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 VR](#). In *CHI Conference on Human Factors in Computing Systems (CHI 21)*, May 2021, Yokohama, Japan.

# Teaching

## Teaching Assistantship

Fall 2019	CS62 Data Structures and Advanced Programming Instructor: Dr. Alexandra Papoutsaki   Pomona College
Spring 2019	CS62 Data Structures and Advanced Programming Instructor: Dr. William Devanny   Pomona College
Fall 2018	CS51 Intro to Computer Science, Java Instructor: Dr. Yuqing Melanie Wu   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 &amp; met with developers to iteratively polish bot design/functionality before launch</li><li>• Implemented regional service instance control functionality with Golang &amp; PostgreSQL for Key Protect clients</li></ul>
---------------------	--

## 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)

## Technical Skills

### Programming

JavaScript, Java, Python, Golang, C#, C++

### Other

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

## Languages

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