

# 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

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| Aug 2022 – present  | Ph.D. in Human-Centered Computing<br>Georgia Institute of Technology, Atlanta, GA<br>Advised by Dr. Amy Bruckman        |
| Aug 2017 – Dec 2021 | Bachelor of Arts, Major in Computer Science, Minor in Asian Studies<br>Pomona College, Claremont, CA<br>Summa cum laude |

## Research

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| Aug 2022 – present  | Graduate Research Assistant<br>School of Interactive Computing, Georgia Institute of Technology, Atlanta, GA   |
| May 2020 – Dec 2021 | Research Assistant<br>Department of Computer Science, Pomona College, Claremont, CA <ul style="list-style-type: none"><li>Conducted HCI/computer vision research on WebGazer, a webcam gaze prediction app, under Dr. Alexandra Papoutsaki</li><li>Created data collection/analysis pipeline for remote user study in ongoing collaboration with University of Central Florida.</li><li>Integrated TensorFlow.js Facemesh face tracking; added IndexedDB browser cache; built prediction accuracy test suite in JS</li></ul> |
| May 2021 – Aug 2021 | Visiting Research Assistant<br>Brown HCI Lab, Brown University, Providence, RI (remote) <ul style="list-style-type: none"><li>Continued development of a robust error testing pipeline for gaze prediction accuracy on Brown HCI's WebGazer</li><li>Integrated Google MediaPipe for biometrics on Portal-ble, a mobile AR environment in Unity, working with Jing Qian</li></ul>   |
| Jul 2019 – Aug 2019 | Summer Research Intern<br>National Taiwan University IoX Center, Taipei, Taiwan <ul style="list-style-type: none"><li>Worked on 2 new VR haptic accessories, FrictShoes and GuideBand, latter was accepted to CHI 2021</li><li>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</li></ul>  |
| May 2019 – Jul 2019 | Undergraduate Research Intern<br>Kōgakuin University, Tokyo, Japan <ul style="list-style-type: none"><li>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</li></ul>   |
| May 2018 – Aug 2018 | Research Assistant<br>Stanford University Asia-Pacific Research Center, Stanford, CA <ul style="list-style-type: none"><li>Researched electoral malfeasance, Taiwan's Central Election Commission, &amp; indigenous land rights w/ Dr. Kharis Templeman</li></ul>  |

## Publications

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| 2021 | H. Tsai, Y. Chang, T. Wei, C. Tsao, X. Koo, H. Wang, B. Chen. <a href="#">GuideBand: Intuitive 3D Multilevel Force Guidance on a Wristband in VR</a> . In <i>CHI Conference on Human Factors in Computing Systems (CHI '21)</i> , May 2021, Yokohama, Japan. |
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# 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>
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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)

# 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)