

# Woojin Ko

M.S. in Computer Science Graduate, seeking full-time roles. US Citizen.

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## Education

**Cornell Tech / Cornell University - Student Government Co-President (PhDs at Cornell Tech '24)** AUG 2022 - PRESENT

**M.S. / Ph.D** in Computer Science: VR/AR & Human-Computer Interaction. **Exp. Grad: May 2025** GPA: 3.74/4.0

- **Teaching Courses:** Human Computer Interaction and Design, Building Startup Systems (Full-Stack)
- **Relevant Courses:** 3D User Interfaces, Virtual and Augmented Reality, Computer Vision, Algorithmic Fairness

**University of California, Berkeley - EECS Honors Program (Breadth Concentration: HCI)** AUG 2017 - MAY 2021

**B.S.** in Electrical Engineering and Computer Science GPA: 3.71/4.0

- **Interaction Courses:** Human Computer Interaction EECS Honors Thesis, Virtual Reality, Graphics, Tech Firm Leadership
- **Technical Courses:** Artificial Intelligence, Machine Learning, Algorithms, Security, Data Structures, Data Science

## Professional Experience

**Amazon Inc. | (Seattle, Remote) Software Development Engineer Intern** MAY 2020 - AUG 2020

- Designed backend API for computing shipping deadlines for Amazon's vendors within the Purchase Order (PO) lifecycle.
- Implemented API using Java and PostgreSQL, handling POs based on varied subsets of rules and parameters.
- Demonstrated successful API calls on thousands of POs and laid groundwork to train on this data for ML predictions.

**National Museum of Math | (NYC) Technical Exhibit Designer Intern** AUG 2021 - DEC 2021

- Designed and redesigned several exhibits, aiming to make math more fun and interactive for museum visitors.
- Created a web application for simulating a harmonograph drawing using HTML/CSS/Javascript.
- Deployed harmonograph application for 500+ attendees to try at the 2021 MoMath Gala fundraiser

**Cornell Tech XR Colaboratory | (NYC) PhD Student Researcher - 2024 JMIR, 2023 Cornell Tech Open Studio** AUG 2022 - PRESENT

- Developed AR headset and mobile applications to assist informal caregivers and remote expert clinicians with at-home care tasks - wound care, drainage, physical rehab - using AR guidance, computer vision, and networked communication.
- Built applications for Hololens 2 with Unity, C#, and OpenCV, and for iPhone with Xcode, Swift, and ARKit.
- Published work at 2024 Journal of Medical Internet Research and presented at 2023 Cornell Tech Open Studio.

**UC Berkeley - FHL Vive Center for Enhanced Reality | Undergraduate Student Researcher** APR 2019 - MAY 2021

- Co-founded an AR system that generates a holographic area for remote users to interact within, as if co-located in person
- Built much of the technical pipeline, leveraging 3D house scan data, spatial optimization algorithms, and the Hololens.
- Published work at 2020 IEEE VR and presented at 2019 International Symposium of Mixed and Augmented Reality.

## Projects & Publications

**2021 Electrical Engineering and Computer Sciences Honors Thesis Project (Berkeley, California) | AR Video Query**

- Created desktop application that enables users to query iPhone video data via timestamps or spatial locations.

**2020 Jacobs Design Institute Innovation Catalysts Spark Grant Winner (Berkeley, California) | Piano Palette AR**

- Developed a real-time AR iPad app that produces visualizations of piano music pieces, winning the 2020 Spark Grant.

**2025 CHI - Conference on Human Factors in Computing Systems (Yokohama, Japan)**

L Jiang, **W Ko**, et. al. "Shifting the Focus: Exploring Video Accessibility Strategies and Challenges for People with ADHD"

**2024 ASSETS - Conference on Computers and Accessibility (St. John's, Canada)**

J Collins, **W Ko**, et. al. "Exploring the Accessibility of Social Virtual Reality for People with ADHD and Autism: Preliminary Insights"

**2024 JMIR - Journal of Medical Internet Research (New York, New York)**

L Albright, **W Ko**, et. al. "Opportunities and Challenges for Augmented Reality in Family Caregiving: Qualitative Video Elicitation Study"

**2023 Cornell Tech Open Studio Showcase (New York, New York) | XRCare Demo**

**2020 IEEE VR - Conference on Virtual Reality and 3D User Interfaces (Atlanta, Georgia)**

M Keshavarzi, A Yang, **W Ko**, L Caldas. "Optimization and Manipulation of Contextual Mutual Spaces for Multi-User Virtual and Augmented Reality"

**2019 ISMAR - International Symposium on Mixed and Augmented Reality (Beijing, China)**

J Menke, **W Ko**, A Yang. "Tutorial: OpenARK - Tackling Augmented Reality Challenges via an Open-Source SDK."

## Technical Skills

**Languages** Java, Python, C#, C/C++, Swift, JavaScript, HTML/CSS, Golang, Bash

**Libraries** Pandas, SQL, TensorFlow, PyTorch, Keras, Sklearn, NumPy, SciPy, OpenCV, Flask, React, Jekyll, ARKit

**Tools** Git, CI/CD (GitHub Actions), Linux, Jupyter, AWS, Azure