

# NAHYUN KWON

<https://nahyunkwon.github.io/>

nahyunkwon@tamu.edu

## RESEARCH INTERESTS

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Human-Computer Interaction, Human-AI Collaboration, Digital Fabrication ([slides](#))

## EDUCATION

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**Texas A&M University, Texas, United States**

Aug. 2020 - Present

*Ph.D. Student*, Computer Science and Engineering

Advisor: Dr. Jeeun Kim

**Ewha Womans University, Seoul, South Korea**

Mar. 2015 - Feb. 2020

*Undergraduate Research Intern*, Computer Science and Engineering

Advisor: Dr. Uran Oh

B.S. in Computer Science and Engineering

## PUBLICATION

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- [Nahyun Kwon\\*](#), Himani Deshpande\*, Md Kamrul Hasan, Aryabhat Darnal, and Jeeun Kim (\*equally contributed). (2021) Multi-ttatch: Techniques to Enhance Multi-material Attachments in Low-cost FDM 3D Printing. In Proceedings of ACM Symposium on Computational Fabrication (SCF'21)
- [Nahyun Kwon](#), Chen Liang, Jeeun Kim. (2021) 3D4ALL: Toward an Inclusive Pipeline to Classify 3D Contents. In Proceedings of the TExSS'21 (TEXSS'21, Workshop on IUT'21)
- Dragan Ahmetovic, [Nahyun Kwon](#), Uran Oh, Cristian Bernareggi, Sergio Mascetti. (2021) Touch Screen Exploration of Visual Artwork for Blind People. In Proceedings of the Web Conference 2021 (WWW'21).
- [Nahyun Kwon](#), Yunjung Lee, Uran Oh. (2021) Supporting a Crowd-powered Accessible Online Art Gallery for People with Visual Impairments: A Feasibility Study. Universal Access in the Information Society.
- [Nahyun Kwon](#), Youngji Koh, Uran Oh. (2019) Supporting Object-level Exploration of Artworks by Touch for People with Visual Impairments. In Proceedings of ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'19). Poster Session.
- [Nahyun Kwon](#), Hayoung Choi, Sangha Park, Dongbo Min. (2018) Deep Learning Based Visitor Age-Gender Estimation and Statistics Service for Visitor Pattern Detection and Efficient Marketing Plan. Korea Software Congress. Poster Session.

## RESEARCH EXPERIENCE

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**HCIED (HCI Engineering and Design) Lab, Texas A&M University**

Sep. 2020 - Present

*Graduate Research Assistant (Advisor: Dr. [Jeeun Kim](#))*

*Texas, USA*

- Human-augmented AI to facilitate intelligent 3D printing
- A human-in-the-loop pipeline using augmented learning, powered by various stakeholders with different backgrounds and perspectives in understanding the 3D content to mitigate personal biases by ensuring transparency and interpretability in the training process of a deep learning model
- Low-cost technique to increase the adhesion between different materials in 3D printing

**Alignment Lab, George Mason University***Research Intern (Adviser: Dr. [Ray Hong](#))*

Jun. 2021 - Aug. 2021

*Virginia, USA (remote)*

- Project: AI-powered interactive 3D printing failure diagnosis & solution suggestion system for remote novice users

**Human Computer Interaction Lab, Ewha Womans University***Undergraduate Research Intern (Adviser: Dr. Uran Oh)*

Jan. 2019 - Aug. 2020

*Seoul, Korea*

- Project: Improving accessibility of 2D artworks for people with visual impairments
- Project: Gesture recognition in mobile devices for people with visual impairments
- Designed crowdsourcing task for collecting annotations of paintings through Amazon Mechanical Turk
- Developed VoiceOver compatible web application for object and part-level verbal descriptions of paintings using HTML, CSS, JavaScript, and D3.js
- Gave poster presentation and presented demo at ASSETS'19 for 'Supporting Object-level Exploration of Artworks by Touch for People with Visual Impairments'

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**WORK EXPERIENCE****WISHUPON Inc.***Commercial Data Scraping Engineer*

Jan. 2018 - Feb. 2018

*Seoul, Korea*

- Project: collecting up-to-date data of products in online shopping malls
- Developed dynamic scraping modules for commercial data
- Analysis of collected commercial data by extracting repetitive patterns from data
- Defined new error types of scraping system for better communication between teammates

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**HONORS AND AWARDS**

Ewha Future Capability Scholarship, Ewha Womans University, 2019

Dean's List, Ewha Womans University, 2018

Ewha Career Planning Scholarship, Ewha Womans University, 2018

Hanum ICT Mentoring Competition Award for Graduation Project 'Smart Visitor Pass', 2018

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**SERVICE****Student Volunteer***IUI 2021*

Apr. 2021

**Workshop Coordinator***Texas HCI-Computer Interaction (TxHCI) Seminar Series (An interdisciplinary seminar hosted virtually across Texas institutions to foster an HCI community, currently co-organized by TAMU, UT-Austin & UT Arlington. <https://txhci.uta.edu>)*

Jan. 2021 - Present

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**TECHNICAL SKILLS & EXPERIENCE**

Programming Language (C, Java, Python), WebDev Language (HTML, JavaScript, CSS)

Data Analysis (Python), Data Warehousing/Visualization (MySQL, D3.js)

Machine Learning (Pytorch, Tensorflow)

Crowdsourcing platform (Amazon Mechanical Turk)

Version-Control System (Git, SourceTree, Jira), MobileDev Language (Android, Swift)