

# NAHYUN KWON

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

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## RESEARCH INTERESTS

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Human-Computer Interaction, Computer Vision, Crowdsourcing, Accessibility

## EDUCATION

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

Aug. 2020 - Present

*Ph.D. Student*

Computer Science and Engineering

Advisor: Dr. Jeeun Kim

**Ewha Womans University, South Korea**

Mar. 2015 - Feb. 2020

*Undergraduate Student*

B.S. in Computer Science and Engineering

## PUBLICATION

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- Nahyun Kwon, Chen Liang, Jeeun Kim. (2021) 3D4ALL: Toward an Inclusive Pipeline to Classify 3D Contents. In Proceedings of the TExSS'21 (Workshop on iUI'21, To appear)
- 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, To appear).
- 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 (UAIS, To appear).
- 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 (Adviser: Dr. Jeeun Kim)* *Texas, USA*

- Hybrid cyberphysical diagnosis system to aid failures of 3D models for novice users
- A human-in-the-loop pipeline using augmented learning, powered by various stakeholders with different backgrounds and perspectives in understanding the content to mitigate personal biases by ensuring transparency and interpretability in the training process of a deep learning model

**Human Computer Interaction Lab., Ewha Womans University** Jan. 2019 - Aug. 2020  
*Undergraduate Research Intern (Adviser: Dr. Uran Oh)* *Seoul, Korea*

- Participating projects which improves accessibility of 2D artworks 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'

**Data Warehousing Lab., Ewha Womans University**

Nov. 2016 - Feb. 2018

*Research Intern (Adviser: Dr. Minsoo Lee)*

*Seoul, Korea*

- Participated in study group for data warehousing using MySQL
- Led personal project about scraping information of Steam games
- Learned data processing & analysis method using Python packages such as Numpy and Pandas by taking online courses of Udacity

## WORK EXPERIENCE

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**WISHUPON Inc.**

Jan. 2018 - Feb. 2018

*Commercial Data Scraping Engineer*

*Seoul, Korea*

- Participated to project collecting up-to-date data of products
- Developed dynamic scraping module for commercial data
- Suggested insights for analysis of collected commercial data by extracting repetitive patterns from data
- Defined new error types of scraping system for better communication between teammates

## HONORS AND AWARDS

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Ewha Future Capability Scholarship, Ewha Womans University, 2019

Dean's List, Ewha Womans University, 2018

Ewha Career Planning Scholarship, Ewha Womans University, 2018

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

## EXTRACURRICULAR ACTIVITIES

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**Private Tutor**

Oct. 2017 - Nov. 2018

*Taught Mathematics to 4 high school students individually*

**Mathematics Teaching Assistant**

Jul. 2016 - Feb. 2017

*Taught Mathematics to over 60 high school students and helped them to solve difficult problems*

## TECHNICAL SKILLS & EXPERIENCE

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

Data Analysis (Python libraries: Numpy, Pandas, etc), Data Warehousing/Visualization (MySQL, D3.js), Machine Learning (TensorFlow, Keras)

Crowdsourcing (Amazon mTurk)

Version-Control System (Git, SourceTree, Jira), OS (Windows, MacOS, Linux, Ubuntu)

MobileDev Language (Android, Swift)