

NAHYUN KWON

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

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RESEARCH INTERESTS

Human-Computer Interaction, Computer Vision, Crowdsourcing, Accessibility

EDUCATION

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 Research Intern

Advisor: Dr. Uran Oh

B.S. in Computer Science and Engineering

PUBLICATION

- 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), *To appear*
- 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

HCIED (HCI Engineering and Design) Lab., Texas A&M University Sep. 2020 - Present
Graduate Research Assistant (Advisor: 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**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

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

SERVICE**Student Volunteer**

Apr. 2021

*IUI 2021***Workshop Coordinator**

Jan. 2021 - Present

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>)

TECHNICAL SKILLS & EXPERIENCE

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

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

Crowdsourcing platform (Amazon Mechanical Turk)

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

MobileDev Language (Android, Swift)