Daekun Kim, Curriculum Vitae

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Education

Candidate for Bachelor of Computer Science, University of Waterloo
Computer Science (Honours), 2019-2024 (Expected), GPA: 94.1% (4.00/4.00)

Research Experience

Undergraduate Research Fellow, University of Waterloo, *Sep. 2020 - Present*

- Human-Computer Interaction, AR/VR research under Daniel Vogel.
- Won an **Honourable Mention award (top 5% of papers)** at CHI 2023 **[C1]**.
- Presented as a speaker at WebAR Workshop for Toronto SIGGRAPH Chapter.

Research Intern (Part-time), Los Angeles, *May. 2023 - Aug. 2022*
Princeton HCI
Building Capybara – Scratch in AR for children

Research Intern, Los Angeles, *May. 2022 - Aug. 2022*
Snap Research
Human-computer interaction, AR, IoT research under Andrés Monroy-Hernández.

Professional Experience

Software Engineering Intern, San Francisco, *Jan. 2021 - May. 2021*
Promethium
Architecting serverless ELT pipeline: 10X reduction in operating cost

Co-founder and Chief Product Officer, Waterloo, *Oct. 2020 - May. 2021*
Scena 360
Web-based 3D gathering space | https://scena360.com

AR/VR Software Engineering Intern, New York City, *Apr. 2020 - Aug. 2020*
Spatial
Virtual reality interaction design with hand tracking

Junior Developer, Vancouver, *Jul. 2018 - Aug. 2018*
Virtro Entertainment
Game development with virtual reality, Node.js + MySQL backend engineering

Scholarships and Awards

Honourable Mention (top 5% of submitted papers) at CHI 2023, 2023
for "Perspective and Geometry Approaches to […]" **[C1]** with Nikhita Joshi and Daniel Vogel.

Snap Creative Challenge Award 🔗, 2022
Received $13,000 for funding researching on the future of moments in AR

Jessie W.H. Zou Memorial Award for Excellence in Undergraduate Research, 2022
$1,000 competitive award to support research activities at undergraduate level (🔗news article)

Undergraduate Research Fellowship, 2021
$7,500 competitive award to fund full-time research

NSERC Undergraduate Student Research Award, 2021
$6,000 competitive award to fund full-time research

President's Research Award, 2020
2 × $1,500 award for undergraduate students pursuing research

Colonel Hugh Heasley Engineering Scholarship, 2019
$10,000 over 4 years based on academic achievement and leadership impact.

Presidential Scholarship of Distinction, 2019
$2,000 scholarship for incoming students with >95% entrance average.

Term Dean's Honours List (3x), 2019-2021
Top 10% in term average among Software Engineering students for 1A, 1B, and 2A terms.

BC Achievement Scholarship, 2019
$1,250 scholarship for exceptional graduating secondary school students

Hack the North Winner, 2018
Winning team out of **1,000 participants** with Wizard Chess **[P2]** project

Publications

Peer-reviewed Conference Proceedings

Note about conference papers: In Human-Computer Interaction, conference proceedings are the preferred publication venue since they are timelier and typically have the greatest impact. Top-tier conferences are selective, with rigorous multi-stage reviews of full manuscripts creating high-quality, fully archival proceedings.

Note about venues: CHI (the ACM Conference on Human Factors in Computing Systems) is recognized as a very top-tier HCI conference (Google Scholar ranks it as #1). The average acceptance rate for CHI is 23%.

C1 **Daekun Kim**, Nikhita Joshi, and Daniel Vogel. 2023. Perspective and Geometry Approaches to Mouse Cursor Control in Spatial Augmented Reality. *In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23), April 23–28, 2023, Hamburg, Germany.* ACM, New York, NY, USA, 19 pages. https://doi.org/10.1145/3544548.3580849

🏆 **Honourable Mention (top 5% of submitted papers)**

Workshops and Extended Abstracts

E1 **Daekun Kim** and Daniel Vogel. 2022. Everywhere Cursor: Extending Desktop Mouse Interaction into Spatial Augmented Reality. In Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems - CHI '22 (pp. 1-6). New York, New York, USA: ACM Press

E2 Johann Wentzel, **Daekun Kim**, and Jeremy Hartmann. 2021. Same Space, Different Place: Designing for Differing Physical Spaces in Social Virtual Reality. In the CHI 2021 workshop "Social VR: A New Medium for Communication and Collaboration".

Press

CTV News, 'Blurring the line between the virtual and the physical word': Waterloo researchers helping develop the metaverse, *Apr. 2022*

CBC News, These University of Waterloo professors are helping build the metaverse, *Apr. 2022*

University of Waterloo, Daekun Kim receives 2022 Jessie W.H. Zou Memorial Award, *May. 2022*

Extracurricular Activities

Vice President, The Water Boys acapella, *Sep. 2020 - Aug. 2023*
Baritone 1 Vocalist. Chosen as Fall '20 soloist for "Little League" by Conan Gray.

Tenor Vocalist, In Full Colour acapella, *Sep. 2021 - Apr. 2022*

Director of Technology, UW VR Club, *Sep. 2020 - Dec. 2020*
Industry update research, WebAR workshops

Selected Projects

P5 *Paint with Light: Painting your room and its objects with* projectors and a Vicon-tracked brush
https://youtu.be/4rj_Q3VJh8c, https://youtube.com/shorts/nwve-VYNJOk

P4 *HoloKinect*: Holographic AR conference platform using Hololens 2 and Azure Kinect
https://youtu.be/7q7NjP-q10g

P3 *Rewinder.me*: Anchored memories made present in AR
https://youtu.be/XoNltK_28DM

P2 *Wizard Chess*: Chess, VR, speech recognition (won Hack the North 2018)
https://devpost.com/software/harry-potter-vr-chess-board

P1 *Reactor Engine*: C++-based OpenGL game engine for PC & MacOS
https://github.com/dkkim6200/ReactorEngine

Portfolio

research and projects portfolio available
daekunkim.com