

# Seik Oh

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## EDUCATION

<b>Georgia Institute of Technology</b> <i>Ph.D. Student in Computer Science</i>	Atlanta, GA, USA Aug. 2025 – Present
<b>Brown University</b> <i>Sc.M. in Computer Science; GPA: 4.0/4.0</i>	Providence, RI, USA May 2025
<b>Soongsil University</b> <i>B.A. in English Language and Literature; B.S. in Computer Science and Engineering</i>	Seoul, South Korea Feb. 2022

## RELATED EXPERIENCE

<b>Graduate Research Assistant</b> <i>TILES Lab, Georgia Institute of Technology</i>	Aug. 2025 – Present Atlanta, GA
• Conducting research in Human–Computer Interaction(HCI), data visualization, and learning science and technology(LST) with an interest in how technology and design methodologies can enhance accessibility.	
• Contributed to research on the design analysis and evaluation of interactive data display for multi-pollutant air quality data.	
• Contributed to analysis and evaluation of epistemic data agency research project.	
<b>Software Developer</b> <i>NASA SUITS 2025 Challenge (via NASA X RISD Rover &amp; Brown University)</i>	Sep. 2024 – May 2025 Providence, RI; Houston, TX
• National Top 10 finalist in NASA SUITS 2025 Challenge presenting and testing at the Johnson Space Center.	
• Engineered mission-specific lunar rover interfaces, translating RISD design specifications into functional software to enhance astronaut usability.	
<b>Research Assistant</b> <i>LNCC Lab, Brown University</i>	Jun. 2024 – Dec. 2024 Providence, RI
• Conducted data collection, preprocessing, and analysis for cognitive modeling studies using the Diffusion Decision Model (DDM).	
• Refined UI/UX prototypes based on pilot testing with 100+ beta users, integrating accessibility adjustments to reduce task error rates and enhancing research outcomes.	
• Collaborated with a cross-functional team of researchers, designers, and engineers to iterate on study protocols and enhance platform scalability.	
<i>Research Assistant Intern</i>	Sep. 2024 – Dec. 2024
• Led UI/UX redesign of the Gearshift Fellowship gamified research platform in Figma, balancing computational psychiatry requirements with accessibility and user experience.	
• Implemented accessibility improvements (typography, contrast, interaction patterns) and developed participant instruction protocols with quality-control checkpoints to strengthen data validity.	
<b>AR/VR Developer</b> <i>NASA SUITS 2024 Challenge (via NASA X RISD Rover &amp; Brown University)</i>	Dec. 2023 – May 2024 Providence, RI; Houston, TX
• National Top 10 finalist in NASA SUITS 2024 Challenge presenting and testing at the Johnson Space Center.	
• Developed an AR program in Unity with MRTK3, implementing spatial mapping, gesture recognition, and object manipulation to support astronaut EVA activities and support seamless lunar exploration.	
• Created AR interface modules (Egress, Navigation, Geological Sampling, Rover Command) and map functions improving spatial awareness.	
<b>iOS Developer (Learner)</b> <i>Apple Developer Academy @ POSTECH</i>	Mar. 2022 – Dec. 2022 Pohang, South Korea

- Developed inclusive iOS app (**SpaceOver**) by bridging UX research with engineering, implementing AR/VR, spatial audio and haptic feedback to support accessibility for non-visual interactions for Blind and Visually Impaired(BVI) users.
- Achieved Top 130 ranking in App Store Entertainment category; selected as one of three showcase projects presented to Apple, government representatives, and media. [GitHub]
- Conducted user-centered research and iterative prototyping with BVI astronomer Dr. Nic Bonne, applying multisensory interaction techniques to enhance accessibility.
- Created and launched multiple additional apps during the program, including **Gaongil** (ranked #14 in App Store News), **AMaDda** (family communication app), and **EcoTales** (educational game), applying agile development and design-to-code practices.

## Technical Assistant

*KATE Conference*

Jul. 2021 – Aug. 2021

*Seoul, South Korea*

- Designed and managed the conference website in WordPress, improving navigation and usability for 200+ attendees.
- Edited and published 20+ lecture videos with Adobe After Effects and Premiere Pro, adding thumbnails and categorization to improve accessibility.
- Ensured accessibility and privacy compliance by removing sensitive information prior to release on the conference platform and YouTube (50+ views each).

## ADDITIONAL PROJECTS

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### Effective Combinations of Pretext Tasks | *Python, PyTorch*

- Conducted research on multi-pretext task combinations, sequencing strategies, and curriculum learning to improve representation quality and downstream classification performance.

### Multi-Caption Diffusion | *Python, PyTorch, Tensorflow, CLIP, ViT*

- Developed diffusion models for image generation using multi-caption conditioning and class embeddings; improved dataset efficiency on CIFAR-10 and COCO [GitHub].

### Face Emotion Recognition System | *Python, OpenCV, VGG-16, ViT*

- Built a real-time facial emotion classification system achieving 70% accuracy; designed interface for potential applications in education and healthcare [GitHub].

### Image & Video Analogies | *Python*

- Extended image analogy models to video using steerable pyramids, enabling efficient style transfer and interpretable video manipulation [GitHub].

### Capstone Project & Graduation Thesis | *TypeScript, React, HTML/CSS, Version Control*

- Developed an open-source knowledge-sharing web platform and co-authored the thesis “*An Open-Source Capable Knowledge-Sharing Web with Distributed Version Control System.*”

### Automated Personalized Email Sender | *Python, Excel*

- Built a Python script to send customized emails using Excel data; distributed certificates to 200+ participants of the KATE Conference.

## PRESENTATIONS

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### Presenter

Dec. 2024

*NASA SUITS Exit Pitch, Johnson Space Center*

*Houston, TX*

- Participated as AR/VR developer at final pitch; addressed technical development questions from NASA evaluation panel [YouTube].

### Presenter

May 2023

*SpaceOver Spotlight, Apple Developer Academy @ POSTECH*

*Pohang, South Korea*

- Presented accessibility-focused iOS app **SpaceOver** for BVI users as one of three showcase projects to Apple, government representatives, and media [Video].

## TEACHING EXPERIENCE

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<b>Tutor</b>	Mar. 2017 – May 2017; Jul. 2020
<i>Voluntary Service in Education</i>	<i>Seoul, South Korea</i>
• Facilitated educational activities and core subjects, improving academic performance of underserved students.	
<b>Student Teacher</b>	May 2020
<i>Chungju Joongsan High School</i>	<i>Chungju, South Korea</i>
• Developed assessment rubrics and led interactive online lessons, enhancing student engagement and outcomes.	
<b>Tutor</b>	Jul. 2019
<i>Summer Student Talent Volunteer Camp (Korea Scholarship Foundation)</i>	<i>Gangwondo, South Korea</i>
• Developed and taught comprehensive curricula; created all teaching materials for summer education camp.	
<b>Private Tutor</b>	Jul. 2015 – Jun. 2017
<i>Self-Employed</i>	<i>Seoul, South Korea</i>
• Designed and delivered customized curricula for university and secondary students in English and Computer Science.	

## ACTIVITIES & VOLUNTEER

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<b>IT Staff</b>	Jul. 2021
<i>KATE Conference</i>	<i>Seoul, South Korea</i>
<b>Staff</b>	Jul. 2016; Jun. 2018; Jun. 2019
<i>Asia TEFL Conference</i>	<i>Vladivostok, Russia; Macau, China; Bangkok, Thailand</i>
<b>Lead Translator and Staff</b>	Feb. 2019; Aug. 2019
<i>EPIK (English Program in Korea)</i>	<i>Chungju, South Korea</i>
<b>News Editor &amp; Reporter</b>	Mar. 2015 – Jun. 2017
<i>The Soongsil Times, Soongsil University</i>	<i>Seoul, South Korea</i>
• Led editorial team, mentored reporters, and managed publication strategy for campus newspaper and special issues.	

## TECHNICAL SKILLS

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**Languages:** Python, Swift, C/C++, C#, SQL, R, LaTeX, HTML/CSS, TypeScript, JavaScript

**Frameworks:** React, SwiftUI, UIKit, Unity, PyTorch, TensorFlow, Scikit-Learn, OpenCV

**Developer Tools:** Git/GitHub, Docker, Notion, Slack, Miro, PowerPoint, Keynote, VS Code, Xcode

**Libraries:** Pandas, NumPy, Matplotlib, SPSS

**Design:** Figma, Sketch

**Tools & Collaboration:** Miro, WordPress, Agile (Scrum & Kanban), Notion, Slack, Ryver

**Languages:** Korean (Native), English (Fluent)