# Seik Oh

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## EDUCATION

**Georgia Institute of Technology**                                        Atlanta, GA, USA
*Ph.D. Student in Computer Science*                                        *Aug. 2025 – Present*

**Brown University**                                                       Providence, RI, USA
*Sc.M. in Computer Science; GPA: 4.0/4.0*                                  *May 2025*

**Soongsil University**                                                    Seoul, South Korea
*B.A. in English Language and Literature; B.S. in Computer Science and Engineering*    *Feb. 2022*
- Teacher's Certificate (Level 2) in English
- Teacher's Certificate (Level 2) in Information and Computer
- GPA: 4.38/4.50 (Ranked 1/46)

## EXPERIENCE

**Graduate Research Assistant**                                            Aug. 2025 – Present
*TILES Lab, Georgia Institute of Technology*                              *Atlanta, GA*
- Conducting research in Human–Computer Interaction(HCI) and data visualization.
- Contributed to the design analysis and evaluation of **ContAQT**, an interactive data display for multi-pollutant air quality data; paper submitted to CHI 2026.

**Software Developer**                                                     Sep. 2024 – May 2025
*NASA SUITS 2025 Challenge (via NASA X RISD Rover & Brown University)*     *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.

**Research Assistant Intern**                                             Jun. 2024 – Dec. 2024
*LNCC Lab, Brown University*                                             *Providence, RI*
- Redesigned Gearshift Fellowship research platform UI/UX in Figma, improving accessibility for users with ADHD and other cognitive conditions; deployed to 100+ beta users.
- Optimized participant data integrity by refining instructions and implementing accessibility improvements that reduced task error rates and enhancing research outcomes.
- Conducted data preprocessing, collection and analysis for cognitive modeling (Diffusion Decision Model), supporting platform scalability and AI-driven insights.
- Collaborated with a cross-functional team of 6+ researchers, designers, and engineers to deliver iterative design improvements and enhance platform scalability.

**AR/VR Developer**                                                        Dec. 2023 – May 2024
*NASA SUITS 2024 Challenge (via NASA X RISD Rover & Brown University)*     *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.

**iOS Developer Learner**                                                  Sep. 2022 – Dec. 2022
*Apple Developer Academy @ POSTECH*                                       *Pohang, South Korea*
- Developed inclusive iOS app (**SpaceOver**) by bridging UX research with engineering, implementing spatial audio and haptic APIs to support non-visual interactions for Blind and Visually Impaired users
- Achieved Top 130 ranking in App Store Entertainment category; selected as one of three showcase projects presented to Apple, government representatives, and media.
- Conducted user-centered research and iterative prototyping with BVI astronomer Dr. Nic Bonne, applying multisensory interaction techniques to enhance accessibility.

- Created and launched 3+ 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**                                                         Jul. 2021 – Aug. 2021

*KATE Conference*                                                               *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).

## PROJECTS

**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.

## TECHNICAL SKILLS

**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)