Seik Oh

seik_oh@gatech.edu | linkedin.com/in/seikoh | github.com/seik-oh

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 Jun. 2024 – Dec. 2024
LNCC Lab, Brown University *Providence, RI*

Research Assistant (Independent Study) *Sep. 2024 – Dec. 2024*

- 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.

Research Assistant Intern *Jun. 2024 – Aug. 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.

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) Mar. 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 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.

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.

PRESENTATIONS

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** as one of three showcase projects to Apple, government representatives, and media [Video].

TEACHING EXPERIENCE

Tutor   Mar. 2017 – May 2017; Jul. 2020
Voluntary Service in Education   *Seoul, South Korea*
- Facilitated educational activities and core subjects, improving academic performance of underserved students.

Student Teacher   May 2020
Chungju Joongsan High School   *Chungju, South Korea*
- Developed assessment rubrics and led interactive online lessons, enhancing student engagement and outcomes.

Tutor   Jul. 2019
Summer Student Talent Volunteer Camp (Korea Scholarship Foundation)   *Gangwondo, South Korea*
- Developed and taught comprehensive curricula; created all teaching materials for summer education camp.

Private Tutor   Jul. 2015 – Jun. 2017
Self-Employed   *Seoul, South Korea*
- Designed and delivered customized curricula for university and secondary students in English and Computer Science.

Activities & Volunteer

IT Staff Jul. 2021
KATE Conference *Seoul, South Korea*
Staff Jul. 2016; Jun. 2018; Jun. 2019
Asia TEFL Conference *Vladivostok, Russia; Macau, China; Bangkok, Thailand*
Lead Translator and Staff Feb. 2019; Aug. 2019
EPIK (English Program in Korea) *Chungju, South Korea*
News Editor & Reporter Mar. 2015 – Jun. 2017
The Soongsil Times, Soongsil University *Seoul, South Korea*

- Led editorial team, mentored reporters, and managed publication strategy for campus newspaper and special issues.

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)