

# Seik Oh

(401) 524-3236 | [seik\\_oh@gatech.edu](mailto:seik_oh@gatech.edu) | [linkedin.com/in/seikoh](https://www.linkedin.com/in/seikoh) | [github.com/glitterer](https://github.com/glitterer)

## EDUCATION

### Georgia Institute of Technology

*Ph.D. Student in Computer Science*

Atlanta, GA, USA

Aug. 2025 – Present

### Brown University

*Sc.M. in Computer Science; GPA: 4.0/4.0*

Providence, RI, USA

May 2025

### Soongsil University

*B.A. in English Language and Literature; B.S. in Computer Science and Engineering*

Seoul, South Korea

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

*TILES Lab, Georgia Institute of Technology*

Aug. 2025 – Present

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

*NASA SUITS 2025 Challenge (via NASA X RISD Rover & Brown University)*

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.

### Research Assistant

*LNCC Lab, Brown University*

Jun. 2024 – Dec. 2024

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

*NASA SUITS 2024 Challenge (via NASA X RISD Rover & Brown University)*

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.

### iOS Developer Learner

*Apple Developer Academy @ POSTECH*

Mar. 2022 – Dec. 2022

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

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

## TEACHING EXPERIENCE

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**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

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### 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

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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)