Seik Oh

127 Angell St, Providence, RI 02906 | E-Mail: glitterer1995@gmail.com
GitHub: github.com/glitterer | LinkedIn: linkedin.com/in/seikoh | Blog: gettingtoknowit.tistory.com

EDUCATION

Brown University, *GPA 4.0/4.0*   *Providence, RI | Expected Graduation May 2025*
  Sc.M., Computer Science

Apple Developer Academy @ POSTECH   *Pohang, South Korea | Dec. 2022*
  iOS Development & Design, Project Management

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

RESEARCH INTEREST

(1) HCI and Accessible Computing for developing assistive and educational technologies for diverse user groups.
(2) Interaction design and Human-Centered AI for accessibility, learning experiences, and social inclusivity in varied contexts.

SCHOLARSHIPS & AWARDS

- Full Scholarship, Apple Developer Academy @ POSTECH | 9M KRW
- University Innovation Scholarship, Soongsil University | 50K KRW
- Leader Certificate as team leader of the [BOOSTCOURSE PY4E COACHING STUDY: 1st], NAVER Connect Foundation
- Scholarship for Academic Excellence from the Spartan SW Education Center (2 semesters) | 1M KRW
- Full scholarship for Academic Excellence (*ranked 1st in department, 4 semesters*), Soongsil University | 13.4M KRW
- Half scholarship for Academic Excellence (*ranked 2nd in department, 3 semesters*), Soongsil University | 5M KRW
- Service Scholarship (Soongsil Press/Broadcasting) for Head of English Newspaper (The Soongsil Times) | 550K KRW

RESEARCH EXPERIENCE

Research Assistant Internship at LNCC Lab, Brown University   *Providence, RI | June 2024 – Dec 2024*
Supervisors: Dr. Nadja R. Ging-Jehli (Postdoctoral Researcher) and Dr. Michael J. Frank (Professor)
- Led redesign of Gearshift Fellowship research platform UI/UX using Figma, integrating computational psychiatry concepts to enhance accessibility for ADHD and other cognitive conditions, expanding online research capabilities and user engagement.
- Strategically optimized data integrity for the research platform by meticulously refining user instructions and implementing robust quality control protocols, substantially enhancing research validity and overall participant experience.
- Lead in data collection and analysis, enhancing research quality for Diffusion Decision Model analysis; program management and interdisciplinary collaboration between diverse domains to accelerate the research platform development.

PROJECTS

2025 NASA SUITS (Spacesuit UI Tech for Students)   *Providence, RI | Sep. 2024 – Present*
- Designing and developing software for mission specific lunar missions integrating AI technology including voice control and computer vision techniques, collaborating with designers from RISD to enhance astronaut functionality.

2024 NASA SUITS (Spacesuit UI Tech for Students)[Github]   *Providence, RI & Houston, TX | Dec. 2023 – May 2024*
- Developed a Heads-Up-Display (HUD) using Magic Leap 2 for the NASA Artemis missions, collaborating with designers from RISD to enhance astronaut functionality during Martian EVAs.
- Created critical interface modules, including Egress, Navigation, and Geological Sampling, and developed a map function for augmented reality (AR), improving spatial awareness and user experience without obstructing the field of view.
- Ensured stable performance and resolved technical challenges during the test and exit pitch at NASA Johnson Space Center.

Master's Course Projects at Brown University   *Providence, RI & Houston, TX | Sep. 2023 – June 2024*
- **Effective Combinations and Variations of Pretext Tasks for Downstream Tasks in Classification:** Conducted research on self-supervised learning, focusing on multi-pretext task combinations, sequencing strategies, and curriculum learning to enhance representation quality and downstream performance [PDF].
- **Deep Learning: Multi-Caption Diffusion**: Developed diffusion models using class embeddings, CLIP, and ViT to enhance image generation on CIFAR-10 and COCO, enabling the creation of large datasets with limited resources [Github / PDF].
- **Computer Vision: What Does Your Face Say?:** Developed real-time emotion classification system using OpenCV, Haar Cascade, and fine-tuned VGG-16 and ViT models, achieving 70% accuracy for applications in other domains [Github / PDF].
- **Computational Photography: Image & Video Analogies:** Extended image analogies to video using steerable pyramids, enhancing style transfer and enabling efficient, interpretable video manipulation without deep learning. [Github / PDF].

Apple Developer Academy @ POSTECH

SpaceOver Project[Github | AppStore]   *Pohang, South Korea | Sep. 2022 – Dec. 2022*
- Collaborated with an interdisciplinary team and developed an app for Blind and Visually Impaired(BVI) users to independently explore celestial objects using spatial audio and haptic feedback, addressing the lack of non-visual astronomical tools.
- Led and conducted user-centered research and iterative prototyping with the BVI astronomer, Dr. Nic Bonne, applying multisensory interaction techniques and contributing to software development, enhancing accessibility in astronomy education.
- Achieved top 130 ranking in App Store's Entertainment category; selected and presented as one of three representative apps for Apple Developer Academy @ POSTECH's media and government showcase [Link1, Link2].

Additional Projects at Apple Developer Academy @ POSTECH   *Pohang, South Korea | Mar. 2022 – Aug. 2022*
- **TextDifficultyLevelClassifier**: An iOS app using CreateML for CEFR-based text assessment, enabling personalized language learning and efficient curriculum development. [Github].
- **AMaDda**: An iOS app to facilitate regular communication with parents, mainly contributing to developing key UI components and enabling persistent data storage settings [AppStore].
- **EcoTales**: Educational game app making environmental education engaging through interactive, gamified lessons [Github].
- **Gaongil**: iOS app for delivering real-time legal updates, enhancing mobile user experience(ranked #14 in News on AppStore [Github; AppStore].
- **Sugeo-Ttakdae:** An iOS app with concise recycling info, promoting sustainable practices among single households.

Other Academic and Personal Projects
- **Automated Personalized Email Sender:** Developed a Python program to automate the sending of personalized emails and attachments using Excel data, successfully distributing certificates to over 200 KATE Conference participants in 2021.
- **Capstone Project & Graduation Thesis (Soongsil University):** Developed an open-source knowledge-sharing web and co-authored the graduation thesis, *"An Open-Source Capable Knowledge-Sharing Web with Distributed Version Control System."*

KEY PRESENTATIONS

2024 NASA SUITS Team RISD x Brown Exit Pitch   *NASA Johnson Space Center, Houston | Dec. 2022*
- Participated as development team member at exit pitch to address questions regarding technological development [Youtube].

SpaceOver Spotlight Presentation   *Apple Developer Academy @ POSTECH, South Korea | May 2023*
- Presented "SpaceOver" at media and government showcase as one of three representing Academy projects [Video Link].

TEACHING EXPERIENCE

Voluntary Service in Education, *Tutor*   *Seoul, South Korea | Mar. 2017 – May 2017; July 2020*
- Facilitated educational activities at childcare centers and tutored core subjects to enhance students' academic performance.

Student Teaching at Chungju Joongsan High School, *Student Teacher*   *Chungju, South Korea | May 2020*
- Developed assessment rubrics and led interactive Zoom-based lessons, enhancing student engagement and learning outcomes.

Summer Student Talent Volunteer Camp, *Tutor*   *Gangwondo, South Korea | July 2019*
- Hosted by Korea Scholarship Foundation, developed and taught comprehensive curricula, creating all teaching materials.

Private Tutoring, *Tutor*   *Seoul, South Korea | July 2015 – June 2017*
- Designed and delivered customized curricula for university and secondary students, enhancing academic performance.

ACTIVITIES & VOLUNTEER

KATE Conference, *IT staff*   *Seoul, South Korea | July 2021*

Asia TEFL Conference, *Staff*   *Vladivostok, Russia | July 2016; Macau, China | June 2018; Bangkok, Thailand | June 2019*

EPIK(English Program in Korea), *Lead translator and staff*   *Chungju, South Korea | Feb. 2019; Aug. 2019*

The Soongsil Times, *News Editor and Reporter*   *Soongsil University, South Korea | Mar. 2015 – June 2017*
- Led the editorial team, mentored reporters, and managed content strategy for the newspaper publication and special editions.

SKILLS

Programming: Python, Swift, C/C++, C#, R, HTML/CSS, SQL, Git/GitHub, LaTex
Frameworks: OpenCV, TensorFlow, Pytorch, Scikit-Learn, UIKit, SwiftUI, Unity, React
Design: Figma, Sketch
Data Analysis: Microsoft Excel, SPSS, R
Program Management/Collaboration: Notion, Slack, Ryver, Miro, Microsoft PowerPoint, Keynote, Agile Development
Languages: Korean, English