JooYoung **Seo**

Ph.D. Candidate (ABD); RStudio Trusted Data Science Instructor

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I am a learning scientist, data-science/software engineer, and internationally certified accessibility professional.

Skills

Braille	UEB (Unified English Braille), Nemeth (Math), Korean, Japanese Brailles
Data Science	R (highly advanced: published 3 packages in CRAN), Python (advanced: tensorflow/keras/scikit-learn), SQL
Reproducible Report	Markdown/Rmarkdown, R shiny apps, Jupyter Notebook, LaTeX, Pandoc, lua
DevOps	Git, Docker, AWS, Travis CI, Cygwin
Front-End	HTML/CSS/JS/PHP/ARIA (advanced level to design according to WCAG 2.0/2.1), WordPress, Drupal, Hugo
Back-End	Unix/Linux Shell scripts, LAMP, Django, REST API
Compile Programming Languages	C/C++/C#, Java, Quorum (as basic level to review source codes and develop simple modules)
Quantitative Research	t-test, within-/between-subjects/Repeated Measures ANOVAs/ANCOVAs/MANOVAs/MANCOVAs, Regressions, HLM, Factor Analysis, Network Analysis, SEM, PCA, Unsupervised/Supervised Machine Learning
Qualitative Research	Virtual Ethnography, Content Analysis, Grounded Theory, Phenomenology, Case Studies, Interaction Analysis
Mixed Research	Text Mining, Quantitative Ethnography, Explanatory/Exploratory Sequential Mixed Methods
Languages	English/Korean (bilingual)

Research Topics

- Accessibility
- Universal Design
- Assistive Technology
- Accessible STEM Learning
- Computational Thinking for Learners with dis/ABILITIES
- Inclusive CSCL (Computer-Supported Collaborative Learning)

Primary Research Methods

- Data Science-Based Reproducible Research
- Learning Analytics/Statistical Computing
- Large-Scale-Longitudinal Quantitative/Virtual Ethnography
- Supervised/Unsupervised Machine Learning-Based Text Mining
- Computational Linguistics/NLP

Education

The Pennsylvania State University *University Park, PA*

Ph.D. in Learning, Design, and Technology *Aug. 2016 - Present*

- Expected graduation: May 2021.
- Dissertation Title: "Discovering Informal Learning Cultures of Blind Individuals Pursuing STEM Disciplines: A Quantitative Ethnography Using Public Listserv Archives."
- Committee members: Drs. Gabriela T. Richard (adviser; dissertation chair), Roy B. Clariana, ChanMin Kim, and Mary Beth Rosson.

The Pennsylvania State University *University Park, PA*

M.Ed. in Learning, Design, and Technology *Aug. 2014 - May. 2016*

- GPA 3.97/4.0.

Sungkyunkwan University *Seoul, South Korea*

B.A. in Education *Mar. 2009 - Feb. 2014*

- GPA 4.08/4.50.

Sungkyunkwan University
B.A. in English Literature

- GPA 4.08/4.50.

Certificates

RStudio PBC

Certified Shiny/Interactive Data Science Instructor

- See certificate.

RStudio PBC

Certified Tidyverse Instructor/Data Scientist

- See certificate.

NV Access

Certified Expert with NVDA (Non-Visual Desktop Access) Screen Reader

- See certificate.

International Association of Accessibility Professional

Certified Professional in Accessibility Core Competencies

- See certificate.

Korean Ministry of Education

Certified English Teacher (Secondary Education)

- See certificate.

Korean Ministry of Education

Certified General Education Teacher (Secondary Education)

- See certificate.

IBM

Python for Data Science and AI

- See certificate.

IBM

Data Analysis with Python

- See certificate.

IBM

Databases and SQL for Data Science

- See certificate.

IBM

Data Science Methodology

- See certificate.

IBM

Open Source Tools for Data Science

- See certificate.

Working Experience

Rstudio PBC

Software Engineer Intern

Boston, MA

May. 2020 - Aug. 2020

- Worked on accessibility improvement projects for Rstudio Server and Desktop IDE, Shiny and Rmarkdown.
- Patched Shiny's bootstrap dependencies to improve navigation of Shiny apps for screen-reader and keyboard users (alert, tooltip, popover, modal dialog, dropdown, tab Panel, collapse, and carousel elements). (Shiny PR #2911)
- Made selectInput widget accessible by patching selectize-a11y-plugin JS library. (Shiny PR #2993)
- Developed a way to pass dynamic alt attribute for reactive plot objects. (Shiny PR #3006)
- Made fontawesome and glyphicon readable to assistive technologies. (Shiny PR #2917)
- Made dateInput and dateRangeInput widgets accessible for screen readers. (Shiny PR #2978)
- Fixed keyboard accessibility for file picker button. (Shiny PR #2937)
- Added semantic landmarks for main and sidebarPanels via aria roles. (Shiny PR #3009)
- Made dynamic output objects accessible to be announced to assistive technologies in real time via aria-live. (Shiny PR #3002)
- Developed a way to pass document-level lang attribute to Shiny apps. (Shiny PR #2920)
- Developed JS code to resolve accessibility issue in highlighted code blocks of HTML output produced by Pandoc for screen reader users. (Rmarkdown PR #1833)
- Added the customizable lang attribute to ioslides_presentation output. (Rmarkdown PR #1841)
- Added the number_sections argument to the word_document() output format. (Rmarkdown PR #1869)
- Authored technical document on how to run RStudio Server via Windows Subsystem for Linux.
- Authored technical document on RStudio Screen Reader Support.

ICE Soft

Co-Founder and Project Manager

Seoul, South Korea

Jul. 2010 - Jun. 2011

- Co-founded and managed a start-up company to develop Android-based navigation App and assistive technology for blind people.
- Applied for and received a $30,000 fund from the city of Seoul.

National Human Rights Commission of Korea

Intern

Seoul, South Korea

May. 2010 - Nov. 2010

- Investigated illegal cases of discrimination against the disabled with regard to voting.
- Interviewed the disabled who had experienced discrimination against their voting rights.
- Produced written report for National Human Rights Commission of Korea.

Software Developments and Publications

Data Science Packages in Comprehensive R Archive Network (CRAN)

Seo, J., & Choi, S. (2020). *Youtubecaption: Downloading youtube subtitle transcription in a tidy tibble data frame.* Retrieved from `https://CRAN.R-project.org/package=youtubecaption`

Seo, J., & Choi, S. (2019). *Ezpickr: Easy data import using gui file picker and seamless communication between an excel and r.* Retrieved from `https://CRAN.R-project.org/package=ezpickr`

Seo, J., & Choi, S. (2019). *Mboxr: Reading, extracting, and converting an mbox file into a tibble.* Retrieved from `https://CRAN.R-project.org/package=mboxr`

Open-Source Project on GitHub

Seo, J. (2019). *Edmdown: Writing a reproducible article for journal of educational datamining in r markdown.* Retrieved from `https://github.com/jooyoungseo/edmdown`

Seo, J. (2019). *Ezviewr: View tidy data in preferable spreadsheet.* Retrieved from `https://github.com/jooyoungseo/ezviewr`

Seo, J. (2019). *Jladown: Writing a reproducible article for journal of learning analytics in r markdown.* Retrieved from `https://github.com/jooyoungseo/jladown`

Seo, J. (2019). *TactileR: Converting r graphics into a braille ready-to-print pdf.* Retrieved from `https://github.com/jooyoungseo/tactileR`

Seo, J., & McCurry, S. (2019). *AROW: Accessible rmarkdown online writer.* Retrieved from `http://www.arowtool.com`

Officially Code_Contributing R Packages

- My GitHub pull requests have been peer-reviewed and merged for active data science R packages:

Chang, W., Cheng, J., Allaire, J., Xie, Y., & McPherson, J.

SHINY: WEB APPLICATION FRAMEWORK FOR R

https://cran.r-project.org/web/packages/shiny/

2020

- Contributed to improving keyboard and TTS accessibility for input widgets.

O'Hara-Wild, M., & Hyndman, R.

VITAE: CURRICULUM VITAE FOR R MARKDOWN

https://cran.r-project.org/web/packages/vitae/

2020

- Contributed to enabling LaTeX engine customization.
- Contributed to displaying multiple bibliographies based on lua filter.

Allaire, J., Xie, Y., et al.

RMARKDOWN: DYNAMIC DOCUMENTS FOR R

https://cran.r-project.org/web/packages/rmarkdown/

2019

- Contributed to improving ioslides_presentation accessibility for screen reading software.

Xie, Y.

BOOKDOWN: AUTHORING BOOKS AND TECHNICAL DOCUMENTS WITH R MARKDOWN

https://cran.r-project.org/web/packages/bookdown/

2019

- Developed context_document2, github_document2, beamer_presentation2, html_fragment2, html_notebook2, html_vignette2, ioslides_presentation2, slidy_presentation2 and rtf_document2 functions to enable R markdown users to utilize cross-references for figures and tables through bookdown package.

Allaire, J., Iannone, R., & Xie, Y.

DISTILL: 'R MARKDOWN' FORMAT FOR SCIENTIFIC AND TECHNICAL WRITING

https://cran.r-project.org/web/packages/distill/

2019

- Contributed to displaying more metadata for journal article bib_entries.
- Improved screen reader accessibility for navigation bar.
- Added missing Google Scholar meta tags for conference, technical report, and dissertation types.

Marwick, B.

WORDCOUNTADDIN: WORD COUNTS AND READABILITY STATISTICS IN R MARKDOWN DOCUMENTS

https://github.com/benmarwick/wordcountadd

2019

- Contributed to text_stats() function for R markdown users to Get a word count and some other stats for selected text (excluding code chunks and inline code).

Godfrey, A. J. R., Warren, D., Murrell, P., Bilton, T., & Sorge, V.

BRAILLER: IMPROVED ACCESS FOR BLIND USERS

https://cran.r-project.org/web/packages/BrailleR/

2019

- Contributed to BRLThis() function to enable blind R users to convert a graph into a pdf ready for embossing in Braille.

Research Experience

Online Interactions of the Blind Research Project   *University Park, PA*

PRINCIPAL INVESTIGATOR   *May. 2019 - Present*

- Conducting quantitative ethnography research on how blind learners pursue STEM disciplines as captured through a large-scale mailing list-servs.
- Using data science, computational linguistics (i.e., unsupervised machine learning for text mining; natural language processing) approaches coupled with conventional ethnographic methods.

Accessible RMarkdown Online Writer (AROW) Project, Teaching and Learning with Technology (TLT)   *University Park, PA*

PROJECT MANAGER   *May. 2018 - Present*

- Developed an accessible web application for people with dis/abilities to easily compose a high-quality scientific document based on LAMP, AJAX, R Markdown, and MathML.

Accessibility of Maker Toolkits Research Project   *University Park, PA*

PRINCIPAL INVESTIGATOR   *Jun. 2017 - Present*

- Conducting usability and design research on how to make current electronics and maker toolkits more accessible for learners with visual impairments.

Playful Learning and Inclusive Design Research Group   *University Park, PA*

GRADUATE RESEARCHER   *Aug. 2016 - Present*

- Conducting interaction analysis and microethnographic studies for Dr. Gabriela Richard's inclusive gaming for learning and accessible makerspaces for youth with diverse background.

IT Accessibility Team, Teaching and Learning with Technology (TLT) *University Park, PA*

Graduate Assistant *Aug. 2016 - Present*

- Testing and consulting for accessible HTML5/CSS3/JS webpages for Penn State University sites and learning management tools (e.g., Angel, Canvas, Voice Thread, Adobe products, etc.)
- Evaluating suitability of digital badges according to web content accessibility guidelines (WCAG) 2.0.
- Engaged in a project for future research on making visualized statistical data accessible.
- Developed a package for statistical software R, called tactileR, which converts visual data into touchable graphs in conjunction with a Swell Form Heating Machine.

Learning2CC Project *University Park, PA*

Site Manager *Feb. 2015 - Dec. 2015*

- Participated in an ongoing learning community project for sharing tips for video caption for deaf learners.
- Developed Learning2CC, the online community site, using the WordPress platform.

Avenue PM Research Group *University Park, PA*

Graduate Researcher *Sep. 2014 - May. 2016*

- Participated in Dr. Simon Hooper's grant project sponsored by the U.S. Department of Education Stepping Stones Phase II program.
- Improved web accessibility for deaf-blind learners by removing blockers on website platform.

The Ministry of Knowledge Economy and Seoul National University *Seoul, South Korea*

Student Researcher *Feb. 2012 - Mar. 2012*

- Visited various places in California, such as CSUN conference, museums, universities, and other publiclocations, to observe universal design products and services.
- Produced a comparison report on universal design products and services in Korea and the United States.
- Presented the report to the Quality of Life Technology team at Seoul National University.

Teaching Experience

IT Accessibility Team, Teaching and Learning with Technology (TLT) *University Park, PA*

Accessibility Instructor *Mar. 2015 - Present*

- Teaching over 30 staff members of the Penn State Accessibility team HTML5/CSS3/JavaScript coding and accessibility evaluation practice.

Gunpo High School *Gyeonggi, South Korea*

Assistant English Teacher *Mar. 2013 - May. 2013*

- Taught English to 10-grade high school students.

Publications

Refereed Journal Papers

Seo, J. (2019). Is the maker movement inclusive of ANYONE?: Three accessibility considerations to invite blind makers to the making world. *TechTrends*, *63*(5), 514–520. `https://doi.org/10.1007/s11528-019-00377-3`

Seo, J., & McCurry, S. (2019). LaTeX is not easy: Creating accessible scientific documents with r markdown. *Journal on Technology and Persons with Disabilities*, *7*, 157–171.

Papers in Refereed Conference Proceedings

Seo, J., & Richard, G. T. (2020). Coding through touch: Exploring and re-designing tactile making activities with learners with visual dis/abilities. In M. Gresalfi & I. Horn (Eds.), *Interdisciplinarity in the learning sciences, 14th international conference of the learning sciences (icls) 2020* (Vol. 3, pp. 1373–1380). Nashville, TN: International Society of the Learning Sciences (ISLS).

Seo, J. (2019). Discovering informal learning cultures of blind individuals pursuing stem disciplines: A quantitative ethnography using listserv archives. *The first international conference on quantitative ethnography: Doctoral consortium*, S66–S67. Madison, WI.

Seo, J. (2018). Accessibility and inclusivity in making: Engaging learners with all abilities in making activities. In *Proceedings of the 3rd learning sciences graduate student conference* (pp. 141–142). Nashville, TN: LSGSC Planning Team.

Seo, J., & Richard, G. T. (2018). Accessibility, making and tactile robotics: Facilitating collaborative learning and computational thinking for learners with visual impairments. In J. Kay & R. Luckin (Eds.), *Rethinking learning in the digital age: Making the learning sciences count, 13th international conference of the learning sciences (icls) 2018* (Vol. 3, pp. 1755–1757). London, UK: International Society of the Learning Sciences (ISLS).

Konecki, M., Lovrenčić, S., **Seo, J.**, & LaPierre, C. (2017). The role of ict in aiding visually impaired students and professionals. *Proceedings of the 11th Multidisciplinary Academic Conference*, 148.

Seo, J., AlQahtani, M., Ouyang, X., & Borge, M. (2017). Embracing learners with visual impairments in cscl. In B. K. Smith, M. Borge, E. Mercier, & K. Y. Lim (Eds.), *Making a difference: Prioritizing equity and access in cscl, 12th international conference on computer supported collaborative learning (cscl) 2017* (Vol. 2, pp. 573–576). Philadelphia, PA: International Society of the Learning Sciences (ISLS).

WORKING PAPERS UNDER REVISION OR REVIEW

Richard, G. T., & **Seo, J.** (under review). Able to play, ready to learn: Proposing an intersectional, critical dis/abilities framework for research, design and practice in video games and learning. *Disability Studies Quarterly*.

Seo, J., & Richard, G. T. (in preparation). *SCAFFOLDing all abilities into makerspaces: Universal design framework for accessible maker movement*.

Presentations

PEER-REVIEWED CONFERENCE PRESENTATIONS

Seo, J., & Richard, G. T. (accepted). *Uncovering latent topics of blind people in computer science: structural topic modeling for an email corpus*. Poster will be presented at the second International Conference on Quantitative Ethnography (ICQE), Malibu, CA.

Donegan, S. R., Porter, C., Fogel, A., **Seo, J.**, Choi, S., & Eagan, B. (accepted). *U.S. media coverage during COVID-19: an epistemic network analysis of bias, topic, and trajectory*. Poster will be presented at the second International Conference on Quantitative Ethnography (ICQE), Malibu, CA.

Seo, J. (2020, September). *Discovering knowledge sharing patterns of blind people pursuing STEM disciplines: data science and computational linguistics on large-scale email corpora*. Poster presented at the Doctoral Consortium of the annual meeting of the ACM Richard Tapia Celebration of Diversity in Computing, virtual. *Awarded the Qualcomm scholarship*.

Seo, J., & Richard, G. T. (2020, April). *Maker inclusivity = maker accessibility: further interrogations for diverse participation*. Poster presented at the annual meeting of the American Educational Research Association (AERA), Virtual.

Seo, J., & Richard, G. T. (2018, April). *Furthering inclusivity in making: a framework for accessible design of makerspaces for learners with disabilities*. Poster presented at the annual meeting of the American Educational Research Association (AERA), New York City, NY.

Bunag, T., Aniela, L., Nielsen, M. C., & **Seo, J.** (2017, November). *The rapidly changing world of accessible online learning*. Presented at the Panel Discussion: DDL - Accessible Online Learning In Concurrent Presentation of the Association for Educational Communications and Technology (AECT), Jacsonville, FL.

Seo, J. (2017, September). *Tactile access to visualized statistical data using R*. Poster presented at the annual meeting of the ACM Richard Tapia Celebration of Diversity in Computing, Atlanta, GA.

Liao, J., Patcyk, M., **Seo, J.**, & Hooper, S. (2016, October). *Using hierarchical linear modeling to measure growth rate in a gamified CBM environment*. Paper presented at the annual meeting of the Northeastern Educational Research Association (NERA), Trumbull, CT.

Seo, J. (2016, March). *Engaging blind learners in statistics study using R*. Presented at the annual meeting of the Teaching and Learning with Technology (TLT) Symposium, University Park, PA.

Kim, K., **Seo, J.**, & Clariana, R. B. (2016, March). *Automatic knowledge structure measure in online courses*. Presented at the annual meeting of the Teaching and Learning with Technology (TLT) Symposium, University Park, PA.

Seo, J. (2015, November). *Assistive technologies for equal access in general education*. Presented at the annual meeting of the Association for Educational Communications and Technology (AECT), Indianapolis, IN.

Seo, J., & Park, E. (2015, October). *The more accessible, the more potential: simple tips for online accessibility*. Presented at the Technology and Learning Conference, Blue Bell, PA.

INVITED GUEST LECTURES

EIT Accessibility Group, The Pennsylvania State University
University Park, PA

BLOCKERS FOR USERS ON A SCREEN READER
Oct. 2019

- Invited guest talk to a webinar to train Penn State instructional designers for key WCAG 2.1 guidelines to make content more accessible including: image alt text, clear link text and heading structure, proper table structure, form and button labels, the need for keyboard functionality and how to convey information regardless of visual formatting.

Chonnam National University
Gwangju, South Korea

A SMALL STEP TO TAKE YOUR DATA ANALYSIS TO ANOTHER LEVEL
Jul. 2019

- Invited guest talk to CNU to teach nursing faculty and students for basic concept of machine learning, computer-assisted text mining, and topic modelling to improve their qualitative data reliability.

Sungkyunkwan University
Seoul, South Korea

BEING A REASONABLE REALIST: WISE NEGOTIATION BETWEEN GIVE AND TAKE
Jun. 2019

- Invited guest talk to SKKU "Student Success Center" as one of the successful role models to inspire undergraduate students for future planning.

The MathML Meeting, The Pennsylvania State University
University Park, PA

ACCESSIBILITY OF MATH, STATISTICS, AND SOCIAL SCIENCES
May. 2019

- Invited guest talk to Penn State MathML group to present assistive technology and accessibility for STEM content.

BBVS Summer Academy STEM Extension
University Park, PA

KEY-NOTE SPEECH FOR STEM EXTENSION
Jul. 2018

- Invited key-note speaker to the STEM (Science, Technology, Engineering, and Mathematics) week of "The Summer Academy for Students who are Blind or Visually Impaired."
- Hosted by the Pennsylvania Department of Labor and Industry, Office of Vocational Rehabilitation's Bureau of Blindness and Visual Services, in partnership with the Pennsylvania Department of Education, Bureau Of Special Education's Pennsylvania Training and Technical Assistance Network and Pennsylvania State University's College of Education and College of Health and Human Development.

LDT 100 - "World Technologies and Learning", The Pennsylvania State University
University Park, PA

ADAPTIVE TECHNOLOGY LESSON
Apr. 2018

- Two times invited guest talk to Dr. Joshua Kirby's class for the week of "The Cost of 21st Century Education."

LDT First Friday Speaking Series, The Pennsylvania State University
University Park, PA

UNIVERSAL DESIGN 101: THREE FUNDAMENTAL FRAMEWORKS FOR AN EQUITABLE WORLD
Apr. 2017

- Invited guest talk to the Learning, Design, and Technology (LDT) program of Penn State to introduce theoretical and practical background of Universal Design for Learning.

Northwestern University
Evanston, IL

INCLUSIVE MAKING
Oct. 2017

- Invited guest talk to Dr. Marcelo Worsley's "Inclusive Making" class for Learning Sciences Program.

The Accessibility Users Group, The Pennsylvania State University
University Park, PA

ACCESSIBILITY TESTING USING NVDA
Jul. 2017

- Invited guest talk to the Penn State online learning Accessibility User Group to train web accessibility testing with open-source screen reader NVDA.

Canvas Day 17
University Park, PA

NON-VISUAL ACCESS TO CANVAS WITH ASSISTIVE TECHNOLOGY
Mar. 2017

- Invited guest to a showcase of Canvas, a learning management tool, to demonstrate how to interact with the online system using assistive technology for students with disabilities.

Ed-ICT International Network: Disabled students, ICT, post-compulsory education & employment
Seattle, WA

STUDENT PANEL DISCUSSION: STUDENT ISSUES
Mar. 2017

- Invited student panel to the first Ed-ICT International Network symposium.

Korea Employment Promotion Agency for the Disabled
Gyeonggi, South Korea

ACCESSIBILITY: THE FIRST STEP TOWARDS ABILITY
Jul. 2016

- Invited guest talk to KEAD to train the employees in concept of accessibility and universal design.

Publications in Healthcare

- I have contributed to the following publications for their methods and research designs.

Choi, S., & **Seo, J.** (2020). An exploratory study of the research on caregiver depression: Using bibliometrics and lda topic modeling. *Issues in Mental Health Nursing*, *0*(0), 1–10. `https://doi.org/10.1080/01612840.2019.1705944`

Choi, S., & **Seo, J.** (2019). Analysis of caregiver burden in palliative care: An integrated review. *Nursing Forum*, *54*(2),

280–290. `https://doi.org/10.1111/nuf.12328`

Choi, S., & **Seo, J.** (2019). Heart failure research using text mining: A systematic review. *NURSING RESEARCH*, *68*(2), E119–E120.

Choi, S., & **Seo, J.** (2019). Trends in self-management among adults with heart failure from 2011 to 2016 using the national health and nutrition examination surveys. *Journal of Cardiac Failure*, *25*(8), S4. `https://doi.org/10.1016/j.cardfail.2019.07.540`

Choi, S., **Seo, J.**, & Kitko, L. (2019). Exploring the lived experience of a family member with advanced heart failure: Using a text mining approach. *The first international conference on quantitative ethnography: Poster session*, S8–S9. Madison, WI.

Choi, S., & **Seo, J.** (2018). Effects of nonpharmacological interventions for fatigue in patients with heart failure: A systematic review and meta-analysis. *Journal of Cardiac Failure*, *24*(8), S73–S74.

Awards and Honors

ACM Richard Tapia Celebration of Diversity in Computing Conference *Virtual*
Qualcomm Scholarship *Sep. 2020*
- Selected as one of the outstanding doctoral consortium proposals.

Disability:IN *Alexandria, VA*
2020 NextGen Leaders *Feb. 2020 - Jul. 2020*

AccessComputing, University of Washington *Seattle, WA*
AccessSTEM Resume contest winners Award *Dec. 2019*
- Sponsored by The National Science Foundation (NSF).

The First International Conference on Quantitative Ethnography *Madison, WI*
Best Doctoral Proposal Fellowship *Oct. 2019*
- Sponsored by Cengage.

The PDK Educational Foundation *University Park, PA*
Andrew V. Kozak Memorial Fellowship *2019*
- 1500

The Spencer Foundation *Toronto, ON, Canada*
AERA Pre-Conference Travel Award *Apr. 2019*

The Pennsylvania State University *University Park, PA*
Delta Gamma Golden Anchor Award *2017*

The Pennsylvania State University *University Park, PA*
Delta Gamma Golden Anchor Award *2015*

The National Science Foundation (NSF) *Atlanta, GA*
ACM Richard Tapia Celebration of Diversity in Computing Conference Scholarship *Sep. 2017*
- Included free conference registration, shared hotel accommodations and a $500 travel stipend.

Microsoft Research *Atlanta, GA*
ACM Student Research Competition Travel Award *Sep. 2017*
- $500 travel stipend was awarded for ACM TAPIA 2017 Student Research Competition (SRC).

AccessComputing, University of Washington *Seattle, WA*
CSUN Conference Travel Award *Mar. 2017*
- Sponsored by The National Science Foundation (NSF).

College of Education *University Park, PA*
Summer Tuition Assistance Funding *2017*

College of Education *University Park, PA*
Graduate Student Travel Grant *Aug. 2016 - Present*

Teaching and Learning with Technology *University Park, PA*
Graduate Assistantship *Aug. 2016 - Present*

Hyomyoung Scholarship

OUTSTANDING ACADEMIC AWARD

Seoul, South Korea

2014 - 2019

ChungInwook Scholarship Foundation

ACADEMIC SCHOLARSHIP FOR DOCTORAL RESEARCH

Seoul, South Korea

2016 - 2018

ANC Scholarship Foundation

ALL NATIONS CHURCH GRADUATE SCHOLARSHIP

Lake View Terrace, CA

2016

National Institute for International Education, Korean Government

FUTURE INTERDISCIPLINARY STUDY OF GLOBAL KOREA SCHOLARSHIP FOR MASTER'S RESEARCH

Seoul, South Korea

2014 - 2016

Sungkyunkwan University

ACADEMIC ACHIEVEMENT SCHOLARSHIP

Seoul, South Korea

2009 - 2013

Grants

College of Education, The Pennsylvania State University

DISSERTATION RESEARCH INITIATION GRANT

University Park, PA

Feb. 2020 - Dec. 2020

- Selected as one of the 10 outstanding dissertation research proposals in 2019-2020 academic year.
- Funding amount: $600.

Center for Online Innovation in Learning, The Pennsylvania State University

PROVIDING TOUCHABLE KNOWLEDGE STRUCTURE GRAPHIC FEEDBACK FOR BLIND ONLINE LEARNERS: TABLET-BASED HAPTIC

FEEDBACK AND PAPER-BASED TACTILE FEEDBACK

University Park, PA

Mar. 2016 - Aug. 2017

- Co-led (Co-PI) a development project funded by Penn State to provide blind online learners with accessible network graphs that measure students' knowledge structure.
- Developed a prototype website and mobile app for accessible knowledge structure.
- Funding amount: $33,060.

Seed Funding for Start-Up Company for the Youth, City of Seoul

ICE SOFT: I SEE EVERYTHING THROUGH ASSISTIVE TECHNOLOGY

Seoul, South Korea

Jul. 2010 - Jun. 2011

- Co-Founded and Project-Managed ICE Soft.
- Worked with a team and developed an gps app for the blind.
- Funding amount: $30,000 USD.

Service

The Pennsylvania State University

COLLEGE OF EDUCATION TECHNOLOGY COMMITTEE

University Park, PA

Aug. 2019 - May. 2020

- Working as a student committee member to support understanding of educational technology for College of Education.

The Pennsylvania State University

LIBRARIES' ACCESSIBILITY STUDENT ADVISORY GROUP

University Park, PA

Aug. 2019 - May. 2020

The 14th International Conference of the Learning Sciences (ICLS)

REVIEWER

Nashville, TN

2019

The ACM CHI Conference on Human Factors in Computing Systems (CHI 2020)

REVIEWER

Honolulu, HI

2019

The 1st International Conference on Quantitative Ethnography (ICQE)

REVIEWER

Madison, WI

2019

The 3rd Learning Sciences Graduate Student Conference (LSGSC)

REVIEWER

Nashville, TN

2018

The 2nd Learning Sciences Graduate Student Conference (LSGSC)

REVIEWER

Bloomington, IN

2017

Center for Online Innovation in Learning (COIL), The Pennsylvania State University

FUNDING REVIEWER

University Park, PA

2016

Current Memberships

- Member, International Society of the Learning Sciences (ISLS)
- Member, Association for Computing Machinery (ACM)

- Member, American Educational Research Association (AERA)
- Member, Association for Educational Communications and Technology (AECT)
- Member, International Association of Accessibility Professionals (IAAP)

Notes

- This CV is reproducible; all the source code behind this CV is available on this GitHub repo.