

Emerging Scholar Recipient

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JooYoung Seo

(he/him/his)

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BIOGRAPHY

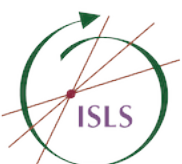
As an information and learning scientist, Dr. Seo focuses particularly on how to make computational literacy more accessible to people with dis/abilities using multi-modal data representation. He worked on various research and development projects on accessible computing and assistive technologies. His research projects have involved not just web accessibility, but also human-centered design and development studies including inclusive makerspaces, tangible block-based programming, accessible data science, and accessible/reproducible scientific writing tools for people with and without dis/abilities.

GENERAL RESEARCH INTERESTS

Accessible computing/data science, ability design human-computer interaction, inclusive Learning Sciences/STEM+C education across dis/abilities, and accessible health informatics.

EMERGING SCHOLAR PROJECT

This project aims to design and develop an accessible data representation system to engage blind learners in data science literacy movement. Over the past five years, we have witnessed rapidly changing education curricula demanding knowledge on data science and artificial intelligence. While the current trends seem to continue, insufficient attention has been paid to how current data science education can accommodate students with disabilities who are increasingly participating in general education settings. As the majority of data science tools and curricula are designed with visually-oriented modality, blind individuals have faced extra challenges. Given that there are over 63,657 legally blind children, youth, and adult students in the U.S. educational settings, it is imperative for information and learning scientists to address this issue which will otherwise continue excluding this group of people from the future education. Among the five procedures of common data science workflow (i.e., importing; wrangling; transforming; visualizing; and modeling), data visualization is considered as the most challenging point for blind people to interpret. Thus, this research project will focus on that aspect within the one-year timeframe.



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