JiWoong (Joon) Jang

Site: joonbugs.github.io | Email: jiwoongj@andrew.cmu.edu | Pronouns: *he/him*

EDUCATION

Carnegie Mellon University - School of Computer Science Pittsburgh, PA
B.S. in Artificial Intelligence, Minor in Human-Computer Interaction *(expected)* 05/2022
GPA: 3.91 / 4.0

RESEARCH AREAS OF INTEREST

HCI, Accessibility, Human-AI Interaction, Social Computing, Computer Vision, Machine Learning

PUBLICATIONS / AWARDS

Published / Accepted Work *(* - denotes equal contribution)*

2022

[C3] Rich Screen Reader Interactions for Accessible Data Visualization (pre-print) EuroVIS 2022
Jonathan Zong*, Crystal Lee*, Alan Lundgard*, **JiWoong Jang**, Daniel Hajas, Arvind Satyanarayan (Accept Rate: 24%)

2021

[C2] Say It All: Feedback for Improving Non-Visual Presentation Accessibility CHI 2021
Yi-Hao Peng, **JiWoong Jang**, Jeffrey P. Bigham, Amy Pavel (Accept Rate: 26%)

[C1] Explorations of Designing Spatial Classroom Analytics with Virtual Prototyping LAK 2021
JiWoong Jang*, Jaewook Lee*, Vanessa Echeverria, LuEttaMae Lawrence, Vincent Aleven (Accept Rate: 31%)

Awards

Carnegie Mellon University Presidential Scholarship *($100K Full Merit Scholarship, 4 years)* F2018 - S2022
Carnegie Mellon University - SCS Dean's List / High Honors (5x) S19, F19, F20, S21, F21
Red Robot Hackathon - General Motors Best Robot Award Oct 2018

RESEARCH POSITIONS

Carnegie Mellon University - AXLE Lab F2021 - Current
Undergraduate Honors Thesis with Dr. Patrick Carrington

My thesis work proposes an exploration of trust-embodying informatics display designs and controls for an autonomous wheelchair. The real-time display system will attempt to transparently and concisely represent the wheelchair's path-planning, highlight risks and uncertainties, while the controls will allow the user to alter path-planning along various axes including social navigation, perceived risk, and legible/predictable motion.

Massachusetts Institute of Technology - MIT Summer Research Program Summer 2021
Research Intern with Dr. Arvind Satyanarayan (MiT Visualization Group)

Ideated novel prototypes for presenting data visualizations to screen reader users in a participatory design process. Conducted a meta-analysis of the state of accessible data visualizations, including documenting the limitations of the current ARIA frameworks and

the as-yet introduced Accessibility Object Model. Contributed to organizing findings to a design space for accessible data visualizations. Work from this project was conditionally accepted to EuroVIS 2022.

Carnegie Mellon University - HCII Summer Research Program Summer 2020 - F2020

REU Research Assistant with Dr. Vincent Aleven

Ideated and conducted research about facilitating designing spatial classroom analytics in AR. Integrated an existing Learning Analytics spatial display based on MRTK/Hololens (Lumilo) into a Unity environment. Prototyped auxiliary designs for Lumilo to facilitate visualization of a human/AI co-orchestration of a peer-student pairing workflow. Conducted formative design feedback interview sessions to validate candidate designs. Resulting paper from this exploration was submitted and accepted to LAK 2021.

Carnegie Mellon University - Big Lab S2020 - F2020

Research Assistant under Drs. Amy Pavel and Jeffrey P. Bigham

Developed a computer vision based automated system to detect whole and partial slide transitions during slide-based lecture videos and conducted a wide-ranging analysis of speakers' verbal coverage of visual content during slide-based lectures across lecture videos from different disciplines. Resulting full paper from this work was submitted and accepted to CHI 2021.

RECENT WORK / EXPERIENCE

Carnegie Mellon University - Human-Computer Interaction Institute F2021

Teaching Assistant for 05-499 / 05-899 (Accessibility)

Carnegie Mellon University - School of Computer Science F2019 - S2020

Teaching Assistant for 15-122 (Principles of Imperative Computation)

Carnegie Mellon University - CREATE Lab (EarthTime / AI & Humanity Archive) Summer 2019

Web Backend / Frontend / Design Intern

Prior to University

Ministry of Health and Welfare - Republic of South Korea Jun 2016 - Jul 2018

Special Task Force (Advisory to the Minister on Accessible Technology)

Community Chest of Korea Mar 2013 - May 2016

Team Lead / Social Worker for Deaf and Hard-of-Hearing Causes

SERVICE / EXTRACURRICULARS

SCS4Accessibility, Lead + Founder F2021 - current

ABLE CMU (Disability Advocacy / Social Awareness Group), VP + Founding Member F2019 - current

Accessibility Research Reading Group (Led/Presented 2 Sessions) S2020 - current

SCS4ALL, Lead Mentor for Under-Upperclassmen Mentorship Program F2018 - current

CMU PRISM (LGBTQ+ Advocacy Group) F2018 - current

RELEVANT COURSEWORK

Current Coursework - Spring 2021 *(*taken at graduate or equivalent level)*

Undergraduate Honors Thesis | Computational Photography* (15-463) | Autonomous Agents (15-482)

Relevant Completed Coursework *(*taken at graduate or equivalent level)*

AI / ML	Computer Vision*, Deep/Reinforcement Learning*, Machine Learning, AI Techniques
HCI	Usable Privacy and Security*, Accessibility Issues*, Interaction Design, Human-Robot Interaction, AI Ethics, Cognitive Psychology
CS Fundamentals	Computer Systems*, Regression Analysis, Statistical Inference, Probability Theory, Multivariate Calculus, Linear Algebra, Algorithms Analysis, Imperative/Functional Programming, Data Structures

SKILLS

Code	*Proficient:* Python, C, C++, JS/TypeScript, HTML+CSS, SML, LaTeX
	Familiar: ROS, Swift, Java, R, Matlab, SQL (learner), Django (learner), OCaml
Software Frameworks	OpenCV, Git, PyTorch (learner), TensorFlow (learner), Scikit-learn, Jupyter, R
Packages / Apps	Stata, Photoshop, Lightroom, Final Cut Pro X, WordPress
Languages	English (fluent), Korean (fluent), ASL (beginner), CASE/PSE (beginner)