Junhan (Judy) Kong

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EDUCATION

Carnegie Mellon University May 2019 - May 2020
Pittsburgh PA, GPA 4.00/4.33
Master of Science in Computer Science
Advisor: Prof. Jeffrey P. Bigham

Carnegie Mellon University Aug 2015 - May 2019
Pittsburgh PA, GPA 3.69/4.0
Bachelor of Science in Computer Science
Additional Major in Human-Computer Interaction
Minor in Machine Learning and Statistics

RESEARCH EXPERIENCE

CMU Human-Computer Interaction Institute, Accessibility Lab May 2019 - Current
Graduate Student Researcher

Project: Supporting Older Adults in Using Complex User Interfaces with Augmented Reality

- Working on authoring tool to create AR user manuals with low cognitive load.
- Exploring modeling and system design of task scaffolding for older adults.
- Presented demo at ASSETS 2019 and working on paper submission.

Project: VizLens++

- Developing iOS app with a computer vision-crowdsourcing pipeline to help visually impaired users use physical interfaces and collect data on their interaction patterns.
- Exploring tangibles and other modalities of feedback for visually impaired users.

CMU Human-Computer Interaction Institute, Accessibility Lab Sep 2017 - May 2019
Undergraduate Research Assistant

Project: StateLens

- Worked on designing, building and iterating on the StateLens system to help visually impaired users use dynamic touchscreen interfaces.
- Ideated modeling of dynamic touchscreen interfaces as *state diagrams*, which represents screen transitions as a state machine and record user interaction information on the edges.
- Designed and implemented the computer vision pipeline of StateLens that dynamically construct *state diagrams* from point-of-view videos.
- Conducted technical evaluations and user studies for paper submission.
- Co-authored paper published at UIST 2019 and presented work at Meeting of the Minds CMU Undergrad Research Symposium 2019

UPMC Post-Operative Care Assistant Capstone Project Jan 2019 - May 2019
Tech Lead

- Conducted extensive user research on post-operative care and technology use of older adults through contextual inquiry and interviews.
- Designed the Hebo 2.0 app for post-operative care of Mohr's surgery at UPMC.

PUBLICATIONS

Junhan Kong, Anhong Guo, Jeffrey P. Bigham. "Supporting Older Adults in Using Complex User Interfaces with Augmented Reality.", In *Extended Abstracts of the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2019).* Pittsburgh, PA.

Anhong Guo, **Junhan Kong**, Michael Rivera, Jeffrey P. Bigham. "StateLens: A Reverse Engineering Solution to Making Existing Dynamic Touchscreens Accessible.", In *Proceedings of the 32nd Annual ACM Symposium on User Interface Software & Technology (UIST 2019).* New Orleans, LA.

AWARDS AND HONORS

The Boeing Blue Skies Award: Game Changer May 2019
For the research project "StateLens: A Reverse Engineering Solution to Making Existing Dynamic Touchscreens Accessible" presented at Meeting of the Minds Carnegie Mellon Undergraduate Research Symposium.
University Honors, Carnegie Mellon University May 2019
TartanHacks 2017: Best Educational App Feb 2017
TartanHacks 2016: Social Impact Prize Feb 2016
Dean's List, Carnegie Mellon University School of Computer Science
Fall 2015, Spring 2017, Fall 2017, Spring 2018, Fall 2018

TEACHING EXPERIENCE

CMU 15-122 Principles of Imperative Computation Aug 2016 - Current
Teaching Assistant (Instructor: Prof. Iliano Cervesato)
Led labs of 100+ students in total, taught recitations of 150+ students in total, held office hours, graded homework assignments.

CMU 05-391 Designing Human-Centered Software Aug 2017 - Current
Grader (Instructor: Prof. Chris Harrison)
Graded homework assignments and helped students with groups projects.

WORK EXPERIENCE

Software Engineering Intern, Google May - Aug 2018
Designed and implemented a benchmark automation platform that continuously runs microbenchmarks in full isolation, collects results, visualizes performance trend over time and detects regression.

Software Engineering and Data Science Intern, Jet.com Jun - Aug 2017
Designed and implemented an automatic machine learning analytics pipeline to gather information from customer service calls and emails; used ML and NLP tools to perform speech recognition, text mining and relevant product detection, then auto-generate analytics data and store in SQL database.

SERVICE AND ACTIVITIES

BHCI Student Advisory Committee Sep 2018 - May 2019
Provide feedback on CMU BHCI (Bachelor of Human-Computer Interaction) program; collaboratively designed and launched BHCI seminar course 05-300 Undergraduate Pro Seminar.

Undergraduate Orientation Counselor Aug 2018
Facilitated and led activities and discussions for first-year students during orientation week; worked with house fellows and residential staff in residential community building.

Undergraduate Student Senate Sep 2015 - May 2016
Member of Academic Affairs Committee; collaboratively organized Student-Faculty Lunches.

SKILLS

Programming Languages: Python, C++, C, Java, Swift, Objective C, C#, F#, JavaScript, R, SQL
Tools and Platforms: Git, Unity, TensorFlow, AWS, OpenCV, CUDA, OpenMP, Hadoop, Spark
User-Centered Research: contextual inquiry, heuristic evaluation, affinity diagramming, storyboarding and speed dating, surveys and interviews
Fabrication: 3D printing