Keenan R. May
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832-247-4415

Accomplishments

- *Involved blind and low vision participants in the design of an auditory augmented reality system* by planning, conducting/overseeing and authoring SWAN project (expected to produce one conference paper and one journal article)
- *Helped support safe behaviors in everyday dual-task scenarios such as cycling and driving* by planning, conducting/overseeing and authoring 6 conference papers and 1 journal article on distraction mitigation methods.
- *Improved student engagement and knowledge outcomes in the Georgia Tech HCI program* by developing and administering lecture and lab content for HCI research methods and design courses.
- *Helped increase the safety of wearable computing devices* by creating a research protocol for measuring auditory Situation Awareness in dynamic environments. Created simulated auditory environment in Python, constructed physical apparatus, and developed participant testing procedure based on literature and existing methods.

Education

Ph.D.	Expected 2019	Georgia Institute of Technology	Engineering Psychology
M.S.	May 2018	Georgia Institute of Technology	Engineering Psychology
M.S.	2012-2014	Georgia Institute of Technology	Human-Computer Interaction
B.A.	2008-2012	Rice University	Cognitive Sciences

Selected Work Experience

PhD Student, Sonification Lab **August 2014 – Present**
Georgia Institute of Technology, Atlanta, GA
Research areas include:

- Creation of design guidelines for auditory augmented/virtual reality systems
- Analysis of the effects of headphone type/ playback variations on cyclist situation awareness.
- Evaluation of in-vehicle audio-based gesture interfaces for driver safety

Teaching Assistant, HCI Research Methods **August 2014 – Present**
Georgia Institute of Technology, Atlanta GA
Developed course content, taught classes, developed, taught and oversaw lab activities for various HCI research methods such as interviews, surveys, statistics, experimental design, participatory design, and usability testing.

Teaching Assistant, HCI Design **August 2013 – Present**
Georgia Institute of Technology, Atlanta GA
Developed course content, taught classes, oversaw user-centered design project teams.

Usability Researcher, AT&T **June 2013 – November 2013**
AT&T Customer Insight, Usability & Accessibility, Atlanta, GA
Improved customer experience with AT&T desktop and mobile sites as reflected by Nielsen ratings by conducting usability tests, heuristic reviews and contextual inquiries.

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Publications

May, K. R., Gable, T. M., & Walker, B. N. (2017, September). Designing an In-Vehicle Air Gesture Set Using Elicitation Methods. *AutomotiveUI 2017* (pp. 74-83). ACM.

May, K. R., & Walker, B. N. (2017). The effects of distractor sounds presented through bone conduction headphones on the localization of critical environmental sounds. *Applied ergonomics*, *61*, 144-158.

May, K. R., Noah, B. E., & Walker, B. N. (2017, September). Multimodal Heads Up Displays to Augment Autonomous Vehicle Supervision. AutomotiveUI 2017. (pp. 246-246). ACM.

May, K. R., Noah, B. E., & Walker, B. N. (2017, September). Driving Acceptance: Applying Structural Equation Modeling to In-Vehicle Automation Acceptance. *AutomotiveUI 2017.*

Wu, S., Gable, T., May, K., Choi, Y. M., & Walker, B. N. (2016). Comparison of Surface Gestures and Air Gestures for In-Vehicle Menu Navigation. *Archives of Design Research*, *29*(4), 65-80.

May, K., Gable, T. M., Wu, X., Sardesai, R. R., & Walker, B. N. (2016, October). Choosing the Right Air Gesture: Impacts of Menu Length and Air Gesture Type on Driver Workload. *AutomotiveUI 2016.* ACM.

Gable, T. M., May, K. R., & Walker, B. N. (2014, September). Applying popular usability heuristics to gesture interaction in the vehicle. *AutomotiveUI 2014* (pp. 1-7). ACM.

May, K. R., Gable, T. M., & Walker, B. N. (2014, September). A multimodal air gesture interface for in vehicle menu navigation. *AutomotiveUI 2014* (pp. 1-6). ACM.

Swette, R., May, K. R., Gable, T. M., & Walker, B. N. (2013, October). Comparing three novel multimodal touch interfaces for infotainment menus. *AutomotiveUI 2013* (pp. 100-107). ACM.

Core Competencies

Experimental Psychology	HCI Research Methods	Interactive System Prototyping / Research Tool Development	HCI Design	Data Science
Human Subjects Research Design	Participatory Design	VR and AR prototyping using Unity and C#	User-Centered Design Process	Data processing with Python
Research Project Management	Qualitative analysis methods	Simulation/ virtual environment design	Universal Design & Accessibility	Data visualization with D3, Tableau, matplotlib
Task Analysis/ Cognitive Task Analysis	Heuristic analysis methods	Interactive prototyping in Python	Information architecture	Large dataset analysis using AWS, SQL, Hadoop, Pig, Spark
Statistical inference using ANOVA, Regression, etc.	Quantitative performance measurement	Frontend web programming	Nontraditional Interface Design	Structural Equation Modeling
Eye Tracking, Physiological Measurement, and Cognitive Workload	Usability Testing, Contextual Inquiry	Sound design	Rapid Contextual Design	
Cognitive & Human Factors Psychology	Interviewing and ethnographic methods	Visual content creation in Adobe Creative Suite		
Academic writing	Survey Design			
Situation Awareness, Simulator Research				