Melynda T. Hoover

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EDUCATION

Iowa State University
M.S. Mechanical Engineering &
Human and Computer Interaction
Minor in Industrial Engineering
3.95 GPA

B.S. Mechanical Engineering
Minor in French Language & Culture
3.86 GPA

WORK EXPERIENCE

HCI Research Assistant
Iowa State University | January 2013-Present

Conducted comparative user testing of VR hardware for displaying an immersive 3D football recruiting app in partnership with the ISU Athletics Department.

Identified effective interface elements for an augmented reality guided assembly application through comparative user testing and data analysis. Presented results at research conference.

Led regular group discussions on how to design effective user studies and mentored students on techniques of research.

Human Factors Engineering Intern
The Boeing Company | May 2016-August 2016

Performed usability testing for new aircraft displays systems using flight simulators.

Prototyped interface for new 777X touch screen displays to test for ergonomic feasibility in turbulent flight conditions.

Planned and conducted user research interviews with pilots to identify needs for new aircraft navigation features.

Sustainment Engineering Intern
The Boeing Company | May 2015-August 2015

Collected data to identify and correct reoccurring system failures and proposed solutions to increase effectiveness of the P8-A Poseidon naval fleet.

PROJECTS & ACTIVITIES

Mobile Cooking App Prototype
January 2017-May 2017

Conducted user research, designed personas, and created hierarchical task analysis to identify feature requirements. Prototyped cooking app using Axure RP and performed user testing and comparative analysis.

President of Engineers Without Borders
Iowa State University | September 2013-Present

Organized $40,000 fundraising effort to build a water distribution system in rural Ghana. Managed team of 12 people to implement engineering solutions overseas.

Graduate and Professional Student Senator
Iowa State University | September 2016-May 2017

Voiced concerns of HCI graduate students to a forum of student governors and voted on university legislation.

SKILLS

Methods
User Research, Interviewing, Surveys, User Testing, Personas, Sketching, Prototyping, Affinity Diagrams, Task Analysis, Interaction Design, Statistical Analysis, User Centered Design

Tools
Axure RP, SPSS, R Studio, MatLab, SolidWorks, C++, Qt, Unity 3D, HTML, CSS

PUBLICATIONS

"Comparing Visual Assembly Aids for Augmented Reality Work Instructions" *I/ITSEC 2017*

"Best Practices for Cross-Platform Virtual Reality Development" *SPIE Defense + Security 2017*

"Assembly Training Using Commodity Physiological Sensors" *I/ITSEC 2016*

"Game-day Football Visualization Experience on Dissimilar Virtual Reality Platforms" *IS&T/SPIE Electronic Imaging 2015*