Matt Whitlock

Circum Vitae

Education

2016– **PhD in Computer Science**, *University of Colorado*, Boulder, CO.

2011–2016 **BS in Computer Science**, *The University of Alabama*, Tuscaloosa, AL.
Honors College Graduate, Minor in Mathematics
Magna Cum Laude

Current Projects

Augmented Reality Interactions, Study on the effects of modality and distance on interaction primitives in augmented reality.

- Designed and implemented augmented reality interactions on the MS HoloLens
- Ran user study on participants, analyzed user performance and feedback
- **Current status:** Paper submitted as 1st author, under review for IEEE VR 2018

In Situ AR Prototyping, Build and evaluate efficacy of system to prototype AR applications with a MS HoloLens.

- Managing team of undergraduates establishing software requirements for such a system
- Designing studies to study tradeoffs of in situ prototyping against existing methods
- **Current status:** System Development

Immersive Data Analytics, Study on the use of VR immersion for data analysis.

- Developing workflow from data entry on Android application to data analysis on Gear VR
- Collaborating with potential end users to evaluate system feasibility
- **Current status:** System Development

Tongue-Computer Interface, Evaluation of externally-worn sensors for detecting tongue gestures as interactions.

- Participated in design and evaluation of headset
- **Current status:** Paper submitted as 6th author, under review for ACM MobiSys 2018

Professional Experience

Research Experience

2017– **Research Assistant**, *University of Colorado*, Boulder,CO.

2016–2017 **Teaching Assistant**, *University of Colorado*, Boulder,CO.
CSCI 4308: Senior Projects 1 and CSCI 4318: Senior Projects 2.

- Managed 8 software engineering groups in their Senior Capstone projects
- Created lesson plans to teach and practice core software engineering concepts
- Organized the end of year Computer Science Expo
- Ranked in 89th percentile for overall instructor score within the College of Engineering
  - 88th percentile within Department of Computer Science

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2013–2013 **Research Fellow**, *Purdue University*, West Lafayette,IN.

- Part of the University's Research Experience for Undergraduates (REU) program
- Built and evaluated use of a robot as a mobile network access point (AP).

Industry Experience

2015–2016 **IT Intern**, *The Home Depot*, Atlanta, GA.

- Created a web frontend and backend for a consolidated product lookup application
- Synthesized with frontend developers, UX designers and product owners
- Reverse engineered the user interface of a management console application

2013–2014 **Engineering Co-op**, *ADTRAN Inc*, Huntsville, AL.

- Term 3: Engineered a communication layer for network management
- Term 2: Developed a software submission tool to manage code changes
- Term 1: Developed network maps for monitoring device performance

Publications

Becoming Butterflies: Interactive Embodiment of the Butterfly Lifecycle, *Annie Kelly, Matt Whitlock, Brielle Nickoloff, Angel Lam, Danielle Szafir, Stephen Voida*, Ubicomp: ACM International Joint Conference on Pervasive and Ubiquitous Computing, 2017.

Enhancing Wi-Fi Signal Strength of a Dynamic Heterogeneous System Using a Mobile Robot Provider, Byung-Cheol Min, Eric T Matson, *RITA: Robot Intelligence Technology and Applications, 2013*.

Relevant skills

Languages

C#, Javascript, Python, Java, Latex.

Frameworks and APIs

Holotoolkit, Aframe (WebVR + WebAR), D3, AngularJS, WebGL, Kinect 1.8, Node.

Software Tools

Unity, JMP, Tableau, MS Office.

Hardware

HoloLens, Gear VR, HTC Vive, Wii Remote, Kinect.

Community Outreach

Mentor UPP	Mentoring Undergraduate Freshmen in Engineering
Every Move Counts	Mentoring and teaching chess at Tuscaloosa Elementary and High schools
UA Honors College	Promoting reading and learning skills in Elementary and Middle schools

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