Andrew **Cordar**

Gainesville, FL

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Education

University of Florida | *Gainesville, FL*
PHD IN COMPUTER SCIENCE | *2011-Present*

- GPA: 3.66/4.0
- Received Graduate Student Fellowship
- Expected to complete June 2017

University of Southern Mississippi | *Hattiesburg, MS*
B.S. IN COMPUTER SCIENCE, MINOR IN SOFTWARE ENGINEERING | *2007 - 2011*

- Graduated with a 4.0 GPA, Summa Cum Laude
- Received Academic Excellence Scholarship
- Received Danny R. Carter Endowed Scholarship

Experience

Mixed Reality Humans for Medical Team Training | *Gainesville, FL*
GRADUATE RESEARCH ASSISTANT | *Fall 2013 - Present*

- Developed and improved technology for mixed reality humans in Unity3D
- Developed new team training system which allows for the mixed reality humans to intelligently respond to user voice input. The system uses Google Cloud Speech Recognition and the Microsoft Language Understanding Intelligence Service (LUIS)
- Designed compelling interactive experiences and conducted two user studies involving over 150 healthcare professionals including nurses, surgical technicians, and anesthesia residents.
- Led weekly conference calls with a diverse team of computer scientists, medical education experts, and healthcare professionals

Virtual Patients | *Gainesville, FL*
GRADUATE RESEARCH ASSISTANT | *Fall 2011 - Fall 2013*

- Led initial investigation into rendering 3D virtual patients on the web using WebGL
- Developed a redesigned conversational user interface for interacting with virtual patients on the web. This interface has been used by hundreds of medical students in the United States.
- Collaborated with faculty at the Medical College of Georgia to design an interactive virtual patient interviewing experience for 70 medical students

Web Frontend for Database - SWIM (Simplified Web Interface Manager) | *Hattiesburg, MS*
DEVELOPER | *Fall 2010*

- Developed on project for US Army Engineering Research and Development Center (ERDC) for easy web management of COBie spreadsheets
- Developed a solution to convert an Autodesk Revit Access Database to a COBie excel spreadsheet.
- Developed a "Super User" frontend Interface to convert an Access database to COBIE and create a webpage to interact with the COBie data.

Collaborative Virtual Reality Environments for Building Information Modeling | *Hattiesburg, MS*
DEVELOPER | *Summer 2010 - Fall 2010*

- Developed on project for ERDC using O3D to interact with and visualize BIM data
- Wrote code to generate 3D terrain based on a height map, wrote tools to excavate 3D terrain
- Wrote shaders to dynamically blend textures based on real world soil data

Technical Skills

- Programming Languages: C#, Java, Javascript, HTML/CSS, PHP, C++
- Game Engines: Unity3D, WebGL
- Virtual and Mixed Reality: Oculus Rift, Microsoft Kinect
- Other: User study/experience design and statistics

Honors & Awards

2011-2015 **Graduate Student Fellowship**, University of Florida   *Gainesville, FL*

2011   **1st Place**, Innovative Design for Computing Competition   *Hattiesburg, MS*

2010   **2nd Place**, Innovative Design for Computing Competition   *Hattiesburg, MS*

2010-2011 **Danny R. Carter Endowed Scholarship**, University of Southern Mississippi   *Hattiesburg, MS*

2007-2011 **Academic Excellence Scholarship**, University of Southern Mississippi   *Hattiesburg, MS*

2007-2011 **President's List**, University of Southern Mississippi   *Hattiesburg, MS*

Peer-Reviewed Publications

- **Cordar, A.**, Wendling, A., White, C., Lampotang, S., Lok, B. Repeat After Me: Using Mixed Reality Humans to Influence Best Communication Practices. in Proceedings of IEEE Virtual Reality, pp. 148-156 (2017)
- Robb, A., Kleinsmith, A., **Cordar, A.**, White, C., Wendling, A., Lampotang, S., Lok, B. Training Together: How Another Human Trainee's Presence Affects Behavior during Virtual Human-Based Team Training. Front. ICT 2016 (2016)
- Robb, A., Kleinsmith, A., **Cordar, A.**, White, C., Lampotang, A., Wendling, A., Lok, B. Do Variations in Agency Indirectly Affect Behavior with Others? An Analysis of Gaze Behavior. IEEE Trans. Vis. Comput. Graph. 22(4): 1336-1345 (2016)
- Foster A., Chaudhary N., Kim, T., Waller J., Borish M., **Cordar, A.**, Lok B., and Buckley P.F., Using Virtual Patients to Teach Empathy: A Randomized Controlled Study to Enhance Medical Students' Empathic Communication, Simulation in Healthcare, online ahead of print, Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare 2016, 11(3), 181–189.
- **Cordar, A.**, Robb, A., Wendling, A., Lampotang, S., White, C., Lok, B. Virtual Role-Models: Using Virtual Humans to Train Best Communication Practices for Healthcare Teams. IVA 2015. LNCS, vol. 9238, pp. 229-238. Springer, Heidelberg (2015)
- Robb, A., White, C., **Cordar, A.**, Wendling, A., Lampotang, S., & Lok, B. A comparison of speaking up behavior during conflict with real and virtual humans. Computers in Human Behavior, 52, pp. 12-21. (2015)
- Robb, A., **Cordar, A.**, Lampotang, S., White, C., Wendling, A., & Lok, B. Teaming Up With Virtual Humans: How Other People Change Our Perceptions of and Behavior with Virtual Teammates. Visualization and Computer Graphics, IEEE Transactions on, 21(4), pp. 511-519. (2015)
- **Cordar, A.**, Borish, M., Foster, A., Lok, B., Building Virtual Humans with Back Stories: Training Interpersonal Communication Skills in Medical Students. IVA 2014. LNCS, vol. 8637, pp. 144–153. Springer, Heidelberg (2014)
- Robb, A., White, C., **Cordar, A.**, Wendling, A., Lampotang, S., & Lok, B. (2014, January). A qualitative evaluation of behavior during conflict with an authoritative virtual human. IVA 2014. LNCS, vol. 8637, pp. 397-409. Springer, Heidelberg (2014)
- Borish, M., **Cordar, A.**, Foster, A., Kim, T., Murphy, J., & Lok, B. Utilizing Real-time Human-Assisted Virtual Humans to Increase Real-world Interaction Empathy. Kansei Engineering & Emotion Research (KEER'14) (2014).
- Lok, B., Chuah, J., Robb, A., **Cordar, A.**, Lampotang, S., Wendling, A., & White, C. Mixed-Reality Humans for Team Training, IEEE Computer Graphics and Applications, Issue 3, pp. 72-75. (May-June 2014)
- **Cordar, A.**, Ali, D., SpyNot: A framework for vetting android apps for security flaws. Journal of Management and Engineering Integration. vol. 5, pp. 113-124. (Summer 2012)
- **Cordar, A.**, Abukmail, A., Traffic Simulation Integration with Google Maps. 17th International Conference on Industry, Engineering, & Management Systems (IEMS). pp. 35-41 Cocoa Beach, Florida (2011)
- **Cordar, A.**, Abukmail, A., Interactive Visualization and Analysis of Hurricane Data, 8th International Conference on Information Technology: New Generations (ITNG). pp. 72-77 Las Vegas, Nevada (2011)