

Jessica Nicole Jones, Ph.D.

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PROFESSIONAL EXPERIENCE

Human-Systems Research Scientist - Naval Surface Warfare Center Dahlgren Division, Dahlgren, VA (October 2019 - Present)

Computer Scientist - Naval Surface Warfare Center Indian Head Explosive Ordnance Disposal Technology Division, Indian Head, MD (June 2018 – October 2019)

EDUCATION

Ph.D. Human-Centered Computing

Degree Completed: May 2018
University of Florida, Gainesville, FL

M.S Computer Science

Degree Completed: December 2014
Clemson University, Clemson, SC

B.S. Computer Science

Degree Completed: May 2011
Hampton University, Hampton, VA

RESEARCH INTERESTS

Human-Computer Interaction (HCI), Human-Centered Computing (HCC), Robotics, Human-Robot Interaction, Educational Technology, Computer Science Education, Natural Interaction

EXPERIENCE

[Scientist] Naval Explosive Ordnance Disposal Technology Division, Indian Head, Maryland (2018 - Present)

[Intern] Naval Explosive Ordnance Disposal Technology Division, Indian Head, Maryland (2012, 2013, 2014, 2015)

- Worked with engineers to develop, implement and test robot control technologies for Explosive Ordnance Disposal tasks using the C++ and Python languages and the ROS and JAUS frameworks.

[Interns] HCC Lab, Clemson University, Clemson, South Carolina (2011)

- Assisted in the design and implementation of a new interface for the Prime III voting system.

[Intern] NASA Langley Research Center, Hampton, Virginia (2010)

- Designed a simulation and data visualization tool for the simple calibration problem with lack of fit.
- Created a tutorial for and sample software using the R programming language to be used by Statistical Engineers in the Aeronautics and Systems Engineering Branch of NASA Langley Research Center.

[Intern] Google Inc., Mountain View, California (2009)

- Implemented a “footnote to endnote” feature that was integrated into Google’s word processor.
- Resolved issues, “bugs”, that were related to features submitted into the code base.
- Made changes to the user interfaces of Google’s word processor, spreadsheet and presentation applications to make them more similar to one another.

TECHNICAL SKILLS

Programming Languages: Java, PHP, JavaScript, C++, Python, Swift

Statistical Software: R, JMP

Operating Systems: Mac OS X, Windows, Linux/Unix

UI/UX Skills: Interviews, Focus Groups, Affinity Diagramming, Storyboarding, Scenario Creation, Wireframing, Balsamiq, InVision, Think-Aloud Protocol

Robotic Frameworks: Robot Operating System (ROS), Joint Architecture for Unmanned Systems(JAUS)

Responsive Web Frameworks Bootstrap

RESEARCH EXPERIENCE/PROJECTS

[Project Technical Lead] Prime III (2011 – 2018)

About: Prime III was developed by researchers in the Human-Centered Computing Lab at both Auburn and Clemson universities. Its multi-modal design, interaction using touch, voice and haptic switch input, makes Prime III a universal machine. This means that all people, regardless of physical and cognitive ability, can vote using one machine. Prime III is the world's most accessible voting machine. The Prime III voting machine is also secure. Prime III cannot be hacked in a way that will change the results of an election undetectably.

Duties:

- Conduct demonstration elections using the Prime III technology.
- Add to and modify the Prime III codebase.
- Conduct research on the efficiency, effectiveness and usability of the Prime III system.
- Serve in an advisory role to subsets of the Prime III team.

[Primary Researcher] A Culturally Relevant, Intelligent, Sight Word Tutor for Second Grade African American Students (2013 – 2018)

About: This research includes the design, development, and evaluation of a culturally relevant, intelligent tutoring system whose aim is to teach sight words to African American, second grade students using pedagogy that aligns with the student's cultural ethos.

[Project Manager and Co-Inventor] TrafficStop (Patent Pending) (2015 – Present)

About: Traffic Stop is an app whose aim is to increase the safety of traffic stops for officers and civilian motorists by using technology to keep them both in their own cars.

[Web Developer] Effectiveness of a Smartphone-based decision support system to stimulate hurricane damage mitigation actions among homeowners in Coastal Hillsborough County, FL communities (2016 – 2017)

About: This research involved the design and development of an interactive decision aide whose aim is to provide users with information about home mitigation and wind damage.

Duties:

- Design, develop, test, and document an application that allows users to assess the potential wind damage costs to their homes.

PUBLICATIONS

Jones, J. N., Smith, T. R., Mack, N. A., Sherman, I., Gilbert, J. E. © (2017). Engagement in Practice: The Development of and Lessons Learned from a Community Focused App Development Course. American Society for Engineering Education. ASEE (Annual Conference) Proceedings, (Columbus, Ohio).

Thomas, S., Jones, J., Gardner-McCune, C., Gilbert, J. (2017). Empowering Middle School Students to be Technical Designers Through an Intergenerational Partnership. In *American Society for Engineering Education Zone 2 Conference Proceedings*, (San Juan, Puerto Rico)

Mack, N., Smith, T., Jones, J., Gilbert, J. (2017). Updated AADMLSS: Design and Evaluation of a Culturally Relevant Algebra Application. In *American Society for Engineering Education Zone 2 Conference Proceedings*, (San Juan, Puerto Rico)

Jones, J., Mack, N., Smith, T., Gilbert, J. (2016). CodeIT Day: Breaking Stereotypes and Feeding the STEM Pipeline. In *American Society for Engineering Education Southeast Section Conference Proceedings*.

O'Toole, A., & Jones, J. N. (2014). A Modular Approach to Video Designation of Manipulation Targets for Manipulators (No. US14-O TOOLE). NAVAL SURFACE WARFARE CENTER INDIAN HEAD DIV MD.

Jones, J.N. & Gilbert, J.E. (2014). SightWord Pal: An Interactive Sight Word Tutor for African-American First Grade Readers. In Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2014 (pp. 1453-1461). Chesapeake, VA: AACE.

Martin, A.M.; Jones, J.N.; Gilbert, J.E., (2013) "A spoonful of sugar: Understanding the over-the-counter medication needs and practices of older adults," In *Pervasive Computing Technologies for Healthcare (PervasiveHealth)*, 2013 7th International Conference on, (pp.93,96)

PRESENTATIONS

[Invited Talk] 12 Tips to Help You Make It Through

- Symposium on Computing at Minority Institutions Annual Conference (2018)

[Presentation] National Academy of Inventors Student Innovation Showcase: Virtual Traffic Stop – Keeping Civilians and Officers Safe

- National Academy of Inventors (2017)
- Link: <https://youtu.be/34aLvYfrhbQ?t=1h15m38s>

[Presentation] Empowering Middle School Students to be Technical Designers Through an Intergenerational Partnership

- ASEE Zone 2 Conference (2017)

[Presentation] Updated AADMLSS: Design and Evaluation of a Culturally Relevant Algebra Application

- ASEE Zone 2 Conference (2017)

[Presentation] SightWord Pal: An Interactive Sight Word Tutor for African American First Grade Readers

- E-Learn – World Conference on E-Learning (2014)

[Invited Talk] Computing is for Girls Too!

- RC Edwards Middle School Girls Club (2013)

[Poster] Prime III: Printing Optical Scan Ballots

- Accessible Voting Technologies Research Workshop (2013)

[Poster] Televoting An Alternative to Internet Voting for Military and Overseas Voters

- Richard Tapia Celebration of Diversity in Computing (2013)
- National Black Graduate Student Conference (2013)

[Invited Talk] Technology in the Classroom: The past, the Present and Beyond

- Clemson School of Computing Graduate Student Association Tech Talk Series (2012)

TEACHING

iOS Development in Swift (Fall 2015, Undergraduate UF, Lead Instructor): In this project-based course, students will learn to develop iOS applications using the Swift programming language and the Apple toolset. Additionally, students will learn basic concepts about designing intuitive and usable interfaces.

Introduction to iOS Development with Swift (Spring 2016, Community Florida Engineering eXperiment Station Network (FLEXNet) & Gainesville Dev Academy, Lead Instructor): In this 12-week project-based, community-oriented course, students will learn to develop iOS applications using the Swift programming language and the Apple toolset. Additionally, students will learn basic concepts about designing intuitive and usable interfaces, coding conventions, debugging tips and keys to being successful in technical interviews.

HONORS & AWARDS

[Honorable Mention] Association for Academic Women Emerging Scholar (2018)

[Finalist] National Academy of Inventors Student Innovation Showcase: Virtual Traffic Stop (2017)

[Awarded] Courtesy Faculty Appointment, Computer & Information Science & Engineering Department, University of Florida (2015)

[Awarded] Grace Hopper Scholarship (2015)

[Awarded] ACM-W Travel Scholarship (2014)

[Awarded] Dr. Tiki Suarez-Brown Student Research Poster Most Engaging Award: Televoting An Alternative to Internet Voting for Military and Overseas Voters, 2013 Richard Tapia Celebration of Diversity in Computing, Washington, D.C (2013)

LEADERSHIP

[Program Coordinator] CodeIT Day (2013, 2014, 2015, 2018)

SERVICE

[Conference Reviewer] HFES 2017 International Annual Meeting (2017)

[Undergraduate Research Mentor] University of Florida, (2016-2017)

- Supervised and supported undergraduate and Master's students on mobile development and educational technology projects.

[Organizer] CodeIT Day, Clemson, SC & Gainesville, FL (2013, 2014, 2015, 2018)

- Middle school students from areas surrounding Clemson University were invited to participate in a hands-on workshop where they learned computing concepts and created their own projects using Scratch drag and drop programming environment along with Nao Robots, Lego WeDo, Lego Pico, Lego Mindstorms and Makey Makey.

[Organizer/Panelist] So You Want To Go To College, Richmond, VA (2015)

- Planned and spoke at a community workshop designed to give parents and students information about preparing for and paying for college.

[Mentor] RC Edwards Lunch and Learn Program, Central, SC (2013)

- Spoke with students about making good decisions, the importance of education and careers in science, technology, engineering and mathematics (STEM)

[Conference Reviewer] Florida Artificial Intelligence Research Society (FLAIRS) (2011– 2012)

AFFILIATIONS

- IEEE (2017 - Present)
- Association for Computing Machinery (2008 – 2010, 2012 – 2014, 2016-Present)
- Human Factors and Ergonomics Society (2016-Present)
- Alpha Kappa Alpha Sorority, Incorporated (2014-Present)
- National Black Graduate Student Association (2013 - 2014)