



TECHNOLOGY FOR SOCIAL CHANGE SERIES

"To Understand the Problem, You Must Understand the People: A Human-Centered Approach Towards Creating an Inclusive and Equitable Society"

Presented by **Earl Huff Jr.**, *PhD Candidate, School of Computing, Clemson University*



Friday, October 15 | 12:00 p.m.

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Abstract: Computer and information technology are increasingly becoming an important factor in shaping how society advances across several domains. In transportation, for example, we see advances in automated driver assistance systems and autonomous driving capabilities to reduce vehicle accidents and save lives. In education, we see in-classroom technology such as smart boards to enhance the quality of instruction and electronic tools to enable remote learning. As society increases to rely on technology, so will the increase of qualified researchers, designers, and developers. Hence, every year jobs in the computing and tech industry are among the highest growth in the U.S. However, computing has historically limited the participation of specific populations from accessing and benefiting from opportunities in the field due to differences in privilege, access, and awareness. The resulting lack of diversity in computing affects who can develop technology and how technology is developed to be usable and accessible for all potential users. Certain technologies, such as desktop applications and touchscreen user interfaces, may be inaccessible for people with disabilities, and A.I.-based technologies may be trained on bias data due to a lack of diverse perspectives. Without diversity in computing, there is a risk that the resulting technology may be created without critical perspectives and may unintentionally provide inequitable user experiences for consumers. This talk discusses current efforts to expand the participation of marginalized groups in computing in terms of access to education and technology. Discussion of groups includes racial and ethnic minorities, women, people with disabilities, and aging adults. Past and existing interventions helped increase students' awareness, agency, and self-efficacy in pursuing a computing career. Designing and developing technology to be inclusive and accessible for everyone is demonstrated with applications of user-centered design (UCD) to consider the perspectives and needs of future users.

Bio: Earl Huff Jr. is a Doctoral Candidate studying Human-Centered Computing in the School of Computing at Clemson University. He is a Research Assistant in the Design and Research of In-Vehicle Experiences (DRIVE) Lab, directed by his advisor Dr. Julian Brinkley. Prior to starting the Ph.D., Earl earned his Master's and Bachelor's degree in Computer Science from Rowan University. His research is at the intersection of human-computer interaction, computing education, and broadening participation.