URBAN ASSEMBLAGE: THE CITY AS ARCHITECTURE, MEDIA, AI AND BIG DATA.

- **Paper / Proposal Title:**
  Unsafe until demonstrated otherwise: Data privacy, accessibility, and safety in the Digital Urban Environment.

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- **Abstract (300 words):**
  A central, but overlooked, element in the design of AI enabled built urban environments is the question of how marginalized communities maintain control of their digital footprint. Members of marginalized communities are often prone to social exclusion and frequently denied full access to various rights, opportunities and resources that are available to members of dominant groups, and which are fundamental to social integration and observance of human rights. LGBT communities remain largely marginalized in many
places and face unique socio-technical challenges and risks surrounding issues of data privacy and data accessibility.

The wealth of available data does offer some benefits to the LGBT community in a digital urban environment. This data can be beneficial for finding community specific support networks such as transgender support groups or legal support networks when properly secured and sanitized. However, the possibility of an AI enabled system outing a member of the LGBT community or revealing gathering spaces for LGBT individuals without their consent or knowledge poses a non-trivial risk to their health, safety, and employment. An example of this concern in practice was a COVID-19 tracking application deployed in South Korea which used cell-phone data to track where the user had been so public health officials could engage in contact tracing. This practice sounds neutral and even beneficial until you realize that the data produced by this app could be used to link individuals to LGBT friendly spaces.

This paper provides a series of recommendations for urban designers and computer scientists working in digitally interconnected environments to ensure that marginalized communities can maintain control of their digital footprint. Recommendations focus on designing data driven applications which are transparent about what data is being collected, how that data is being used, and what options an individual can use to delete potentially harmful information.

- **Author(s) Biography (200 words each):**

  **Audrey Reinert** is a Postdoctoral Researcher at the University of Oklahoma's Data Science Institute for Societal Challenges (DISC Center). She holds a PhD in Industrial Engineering from Purdue University (2019), a Masters in Human Computer Interaction from the Georgia Institute of Technology (2015), and a Bachelors in Cognitive Neuropsychology from the University of California, San Diego (2012). Her research interests lie at the intersection of human centered computing, data visualization, and human machine interaction. She is a member of IEEE, HFES, and the AGU and can be reached at areinert@ou.edu

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an MS in environmental behavior from the University of Michigan. More on his research and teaching can be found at brycelowery.com.

**David Ebert** is an Associate Vice President for Research and Partnerships, the Gallogly Chair Professor of Electrical and Computer Engineering, and Director of the Data Institute for Societal Challenges at the University of Oklahoma. He is an IEEE Fellow, recipient of the 2017 IEEE Computer Society vgTC Technical Achievement Award, member of the IEEE vgTC Visualization Academy, an adjunct Professor of Electrical and Computer Engineering at Purdue University, and Director of the Visual Analytics for Command Control and Interoperability Center (VACCINE), the Visualization Science team of the Department of Homeland Security's Visual Analytics and Data Analytics Emeritus Center of Excellence. Dr. Ebert received his Ph.D. in Computer and Information Science from The Ohio State University and performs research in visual analytics, novel visualization techniques, interactive machine learning and explainable AI, human-computer teaming, advanced predictive analytics, and procedural abstraction of complex, massive data.