Abstract:
The proliferation of data generated on internet-enabled devices has flooded the machine learning community with numerous research opportunities. Over the next several years, behavior analytics will grow as a means to understanding how individuals behave in cyberspace; these analyses are useful for identifying an individual through patterns found in behavior using behavioral biometrics. Biometrics, or the use of physiological or behavioral characteristics for identifying an individual, has received an immense amount of attention, particularly as commercial technologies, such as Apple’s Touch ID, have introduced biometrics into the consumer market. Biometric recognition is typically considered a more reliable alternative for access control. In particular, behavioral biometrics measure the consistency and distinctiveness of behavioral tendencies and can thus provide cost-effective and intuitive access control, and have appropriately been referred to as transparent, continuous, active, and unobtrusive. Throughout this talk, I will discuss behavioral biometric recognition using mobile device usage data. Mobile devices are a main source of cyber data; as humans interact with these devices, it is expected that the habitual nature of behavior results in the ability to model the various patterns which are distinct to each person. These patterns, which are extracted as biometric features, are later examined for their identification and verification potential. I will elaborate on the phases on biometric recognition, current challenges, applications, and future work.

Bio:
Tempestt Neal is a Ph.D. candidate in the Department of Computer and Information Science and Engineering at the University of Florida. She received her B.S. in Computer Science from South Carolina State University, and a M.S. in Computer Science from Clemson University. Her research interests include behavioral biometrics, identity science, and cybersecurity using applied machine learning, pattern recognition, and data science. Her current work uses mobile device data and online text samples for determining the suitability of cyberdata for biometric recognition. In her free time, she enjoys traveling, trying new foods, and exercising.