# RIT

## AWARE-AI NSF Research Traineeship Program

# Spotlight on Research Track: Human-sensing AI Software

The AWARE-AI program's human-sensing AI software research track aims to develop AI systems and algorithms that process and respond to heterogeneous, heavily multimodal input as flexibly as humans. Humans can adapt during interaction by integrating various heterogeneous and temporally evolving data sources such as dialogue, voice inflection, facial expressions, head and body pose, eye movements, touch, biophysical cues, and other environmental information. In contrast, AI systems tend to be unimodal or incapable of similar dynamic flexibility in real-world interactions.

Trainees and faculty in the human-sensing AI software research track meet regularly to review and discuss relevant research and consider their implications for advancing multimodal AI systems. The trainees involved in this track are from graduate programs in three colleges and include Matt Altobelli, Naveen Kudli Balaji, Kevin Barkevich, Will Gebhardt, Arianna Giguere, Viet Nguyen, Michael Peechatt, and Rajesh Titung. The track is led by Dr. Reynold Bailey and additional faculty in the track include Drs. Cecilia Alm, Gabriel Diaz, and Alexander Ororbia.

To advance the track's research goals, trainees have been conducting various research studies, including data collection and machine-learning modeling experiments. Eventually, we plan to release heavily multimodal datasets with published manuscripts. The program is grateful for the support of RIT Research Computing as we work towards establishing this database for the wider research community.