EAGER:SaTC-EDU: Improving Cybersecurity Education for Adolescents with Autism Through Automated Augmented Self-Monitoring Applications

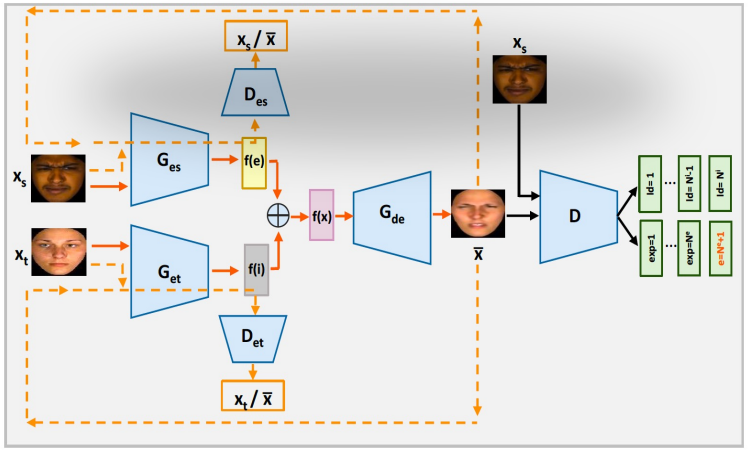
UNIVERSITY OF CENTRAL FLORIDA

Challenge:

- To use virtual learning environments to help adolescents with autism deal with cyberbullying and attempts to compromise their cyber privacy.

Solution:

- Studying how human puppeteered virtual character behaviors can inform and drive the development of AI-assisted virtual agents/companions.
- Improve deep learning algorithms for emotion recognition by fusing facial, gaze, and body poses with auditory information.



25th International Conference on Pattern Recognition (ICPR), 2020, 9460-9467.

Expected Impact

- The use of multimodal data, e.g., facial expression, eye gaze, heart rate, and heart rate variability, with planned extensions to body posture, breathing rate, verbalization, and vocalization.
- Emotion recognition in real-time settings and attention to implicit biases that are often found in FER systems

Broader Impact and Broader Participation:

- Integration of multisensory data for a neurodiverse population has great potential for the broader population as improvements for populations facing challenges lead to improvements for the public.
- Helping students with ASD be more successful socially and technically can be a major contribution to society and our nation's workforce.

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