# DEPARTMENT OF COMPUTER SCIENCE

Missouri University of Science & Technology

# Affective Computing, AI for Health

## Human-centered AI:

- Facial Expression Recognition(FER);
- FACS detection:
- Activity Recognition;
- 3D facial modeling;
- Wearable-based human modeling
- Affective computing;

# Al for Health:

- Learning from the large amount of unlabeled diverse modalities collected from human (representation learning, self-supervised learning, anomaly detection, domain adaptation, etc);
- Providing interpretable evidence for decision making;
- Improving the delivery of care to patients





**BU-EEG** (above) records both the 128-channel EEG signals and face videos.



#### **BP4D++** (above)

Multimodal Spontaneous Emotion Corpus, which contains multimodal datasets including synchronized 3D, 2D, thermal, physiological data sequences.

### **Keywords:**

- Affective Computing
- Representation Learning
- Multimodal Machine Learning
- Human-centered AI
- Al for Health



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