**Age and Gender detection using Deep Learning**

**Abstract**

Securing Internet of Things (IoT)-enabled cyber physical systems (CPS) can be challenging, as security solutions developed for general information / operational technology (IT / OT) systems may not be as effective in a CPS setting. Thus, this presents a two-level ensemble attack detection and attribution framework designed for CPS, and more specifically in an industrial control system (ICS). At the first level, a decision tree combined with a novel ensemble deep representation learning model is developed for detecting attacks imbalanced ICS environments. At the second level, an ensemble deep neural network is designed for attack attribution. The proposed model is evaluated using real-world datasets in gas pipeline and water treatment system. Findings demonstrate that the proposed model outperforms other competing approaches with similar computational complexity.