Worksheet 2 (StepScan)

Topic 1: Center of Pressure (COP) Features (Biometrics Field)

1) Review papers related to the COP features-based biometrics
    a. Jung et al.
        i. [2004] [J] Dynamic Footprint-Based Person Recognition Method Using a Hidden Markov Model and a Neural Network
        ii. [2003] [C] Dynamic-Footprint Based Person Identification Using Mat-Type Pressure Sensor
        iii. [2013] [C] Person Recognition Method Using Sequential Walking Footprints via Overlapped Foot Shape and Center-of-Pressure Trajectory
    b. Qian et al.
        i. [2010] [J] People Identification Using Floor Pressure Sensing and Analysis
        ii. [2008] [C] People Identification Using Gait Via Floor Pressure Sensing and Analysis
    c. Zhang et al.
        i. [2009] [C] Footprint Tracking and Recognition Using a Pressure Sensing Floor
    d. P. Terrier
        i. [2020] [J] Gait Recognition via Deep Learning of the Center-of-Pressure Trajectory
    e. P. Connor
        i. [2015] [C] Comparing and Combining Underfoot Pressure Features for Shod and Unshod Gait Biometrics

Checkpoint

1) What features (dimensionality reduction methods) were extracted from the COP time series in these papers?
2) How can we use 2D COP trajectories to identify left and right footsteps?