1. Gait Recognition

Gait data, acquired from an individual's body movement during walking, can provide important identity information.

- Due to the unconstrained nature of gait recognition, gait data can be captured from different viewpoints, so some parts of the body can be hidden from one view to another.
- The appearance of individuals can also be different due to variations in clothing, for instance wearing a coat or hat, or carrying a handbag or backpack.

2. Proposed Solution

We propose a novel deep network, learning to transfer partial gait representations using capsules to obtain more discriminative gait features robust to both viewing and appearance changes.

3. Datasets

- **CASIA-B dataset:** 124 subjects in 3 different walking conditions and 11 different view angles.
- **CASIA-B dataset:** 10,307 subjects in 2 different sessions and 14 different view angles.

4. Results

- **Table 1:** CASIA-B gait recognition results under normal (NM) walking conditions.
- **Table 2:** CASIA-B gait recognition results under different clothing (CL) conditions.
- **Table 3:** CASIA-B gait recognition results under unconstrained (UC) conditions.
- **Table 4:** MUG-UC evaluation results.

- **Table 5:** Results compared to state-of-the-art approaches.
- **Table 6:** Comparison of our method with other approaches.

5. Feature Space Exploration

- Our model obtains state-of-the-art values for gait recognition on two gait datasets.

6. References