

# EE6427 Assignment: Controllable Video Generation

Ziming Yan, G1234567A

## Part 1: Objective and Motivation

Pose-guided video generation aims to synthesize realistic videos where motion is controlled by human poses while preserving identity and appearance. The motivation is to allow precise and intuitive control over human motion in generated videos. Pose guidance provides structured spatial-temporal constraints, ensuring motion accuracy and natural dynamics. This approach is valuable for animation, virtual reality, fitness training, and film-making, where generating high-quality motion sequences from limited input data can save significant manual effort.

## Part 2: Infographic / Figure

### References

- [1] Chan, C. et al., “Everybody Dance Now”, CVPR 2019.
- [2] Siarohin, A. et al., “First Order Motion Model for Image Animation”, NeurIPS 2019.
- [3] Zhang, X. et al., “Pose-Guided Person Image Generation”, ICCV 2019.