NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE

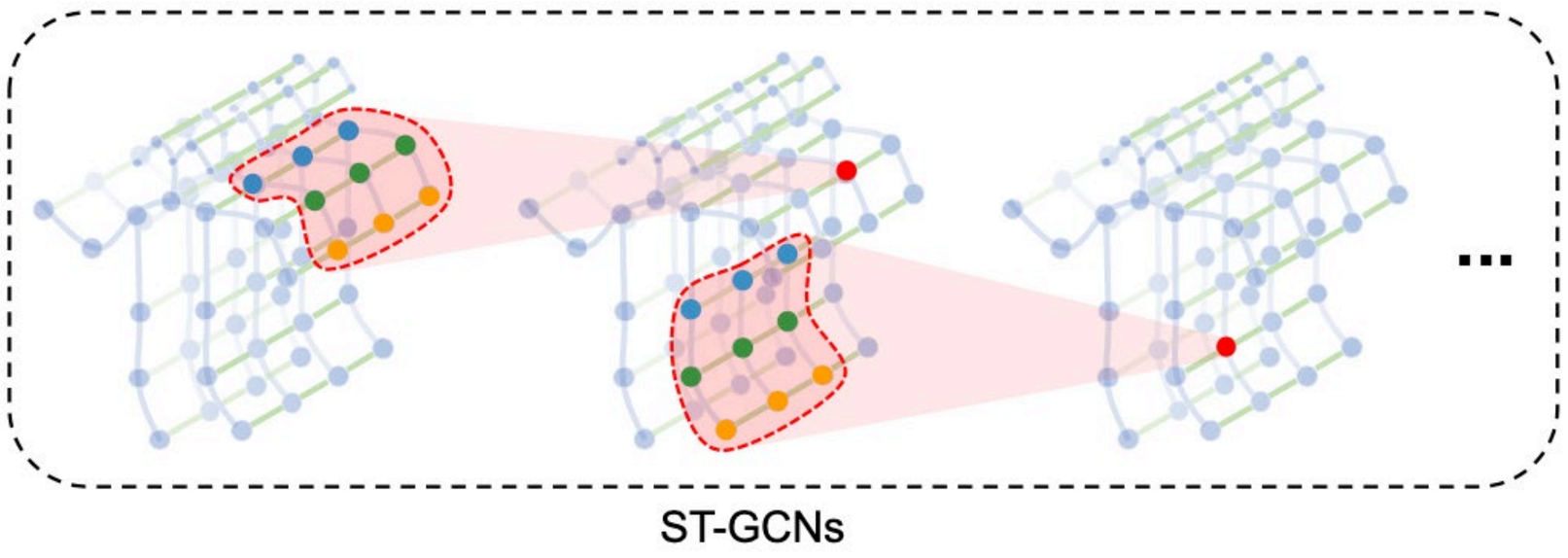
School of Computer Science and Engineering
College of Engineering

Improving Skeleton-Based Action Recognition

Training with Generated Soft Targets

Student: Timothy Tan Choong Yee

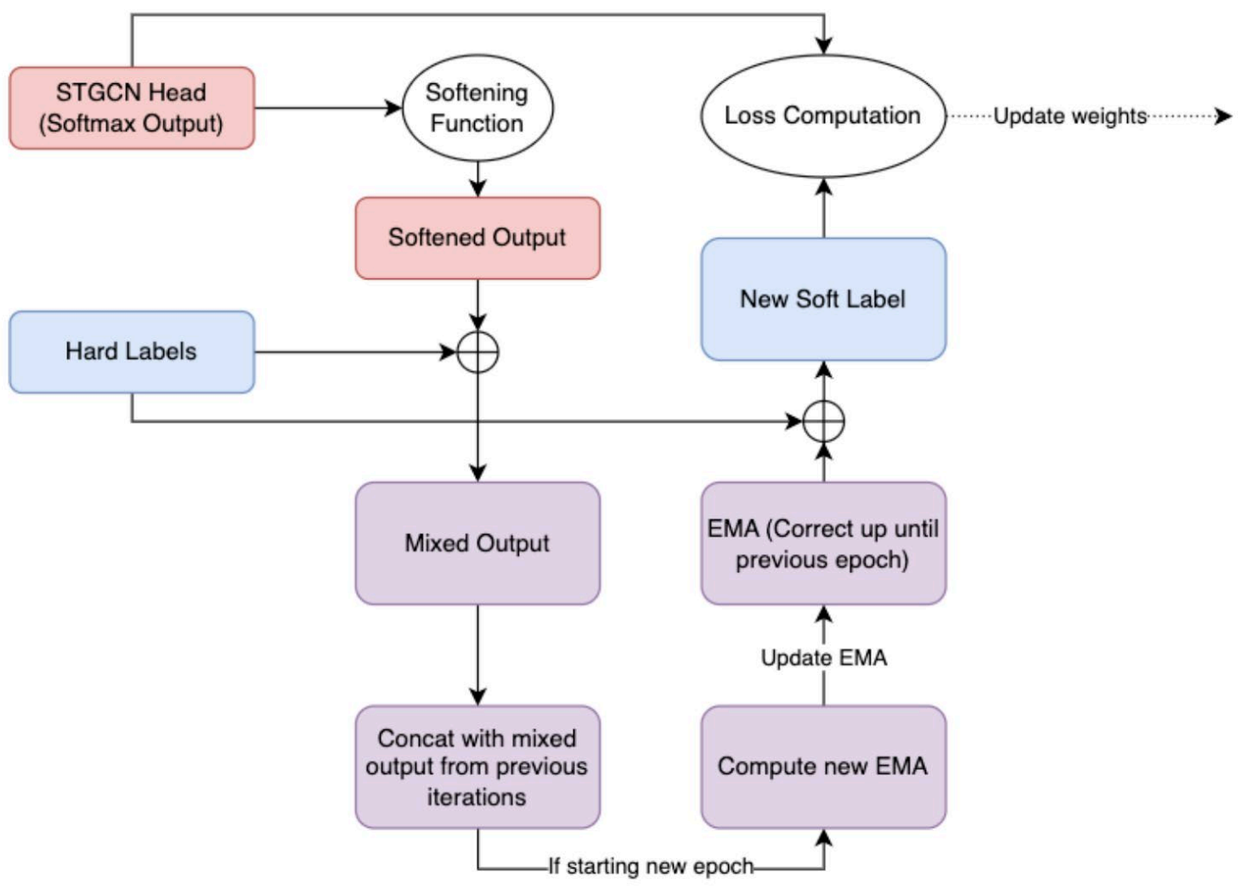
Supervisor: Assoc Prof Yeo Chai Kiat



Project Objectives:

This project involves a literature review of the art skeleton-based action recognition models and current deep learning techniques. In addition to this, a new training algorithm is designed in attempts at improving one of the action recognition models, by incorporating soft targets into the training process. Training on soft targets has been shown to be an effective method for model distillation with deep neural networks. Taking inspiration from this idea and other previous works, a new method generating soft targets iteratively during training is proposed.

Experimentation and basic hyperparameter tuning is conducted to produce a model that achieves a marginal improvement in validation accuracy when compared to the baseline.



PyTorch

MMAction2