README

1. **Implementation**
    a. Language: Python3.8+
    b. Main frameworks: PyTorch (training networks), TensorLy (separable convolutions)
    c. References:
        i. Follow-up research (original): https://github.com/face-analysis/emonet
        ii. Follow-up research: https://github.com/jingyang2017/emonet_train
2. **Files**

- model related (7):
    - `preprocess_data.py`: preprocessing the image data: scaling, normalizing, cropping, etc.
    - `metrics.py`: evaluation metrics for the model
    - `utils.py`: shake-shake regularization
    - `resnet2d.py`: the base 2d ResNet
    - `proposed_resnet2d.py`: implemented 2d version of proposed model, adding separable convolutions, and tensor regression classification
    - `train.py`: train the ResNet model
    - `proposed_train.py`: train the proposed model
- result related (3):
    - `result.ipynb`: reproduction of model results
    - in folder `.result/`:
        - `proposed_model.pth`: proposed model
        - `model.pth`: ResNet

3. Results:

	Paper		**Implemented**	
	Valence	Arousal	Valence	Arousal
2D ResNet-18	0.43	0.41	0.11	0.50
2D HO-CPConv (Proposed)	0.24	0.24	0.21	0.25