NegPrompt to CoOp Structure

- **Load DataSet:** 略
- **Load cfg:** 略

依赖文件不显式写出

Make a new trainer class to integrate into CoOp structure

2 parts to transfer:

1. model definition: to the same file of trainer, call by the new trainer class
2. training pipeline: to the new trainer class

引用代码：加粗表示NegPrompt的代码，斜体表示CoOp框架

1. model definition: from models/model.py

Positive Prompt

- **pos prompt:**
    - Basically the same as *trainers/coop.py*
    - **prompt learner**
    - **text encoder**
    - **original CLIP** → *Customize CLIP*

Negative Prompt

- **neg prompt:**
- Make a new trainer with:
    - **nega prompt learner**
        - use **nega prompt learner.forward negative**
    - **nega text encoder**
    - **Nega Prompt CLIP** (use **forward negative**)
- *new trainer.forward_backward* (get loss and update):
    - **core/train_clip.py** → function **train-nega-clip**

2. Training Pipeline: for the new trainer

Stage 1: Get Positive Prompt

- Check if other parameters needed to store (e.g., consistent dimension)
- Store pos prompt

Stage 2: Get Negative Prompt

- *new `trainer.before_train`* :
  - `NegaPromptLearner.update_ctx_positive`
  - (Load pos prompt and initialize neg prompt)
- *new `trainer.run_epoch`* :
  - `core/train_clip.py` → function `train-nega-clip`
- *new `trainer.after_train`* :
  - Visualize (t-SNE)
  - `Nega Prompt CLIP.draw-tsne-plot`
- *new `trainer.test`* :
  - `core/test_clip.py` → function `test-nega-clip`