KAIST Include 동아리 스터디

AlphaGo와 AlphaGo Zero를 만들며 익히는 딥러닝 및 강화학습

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과제 안내

- 딥러닝 라이브러리 사용하기
  - TensorFlow 2
  - PyTorch

딥러닝 라이브러리 시작하기

- TensorFlow 2 : https://www.tensorflow.org
  - 설치 방법
    - CPU 버전 : `pip install tensorflow`
    - GPU 버전 : `pip install tensorflow-gpu`
  - 튜토리얼 : https://www.tensorflow.org/tutorials
    - MNIST : https://www.tensorflow.org/tutorials/quickstart/beginner
    - 이미지 분류 : https://www.tensorflow.org/tutorials/keras/classification
    - 텍스트 분류 : https://www.tensorflow.org/tutorials/keras/text_classification
    - 회귀 : https://www.tensorflow.org/tutorials/keras/regression
    - 과소적합과 과적합 : https://www.tensorflow.org/tutorials/keras/overfit_and_underfit
    - 저장하기 및 불러오기 : https://www.tensorflow.org/tutorials/keras/save_and_load

딥러닝 라이브러리 시작하기

- PyTorch : https://pytorch.org
  - 설치 방법 (Windows 기준)
    - CPU 버전 : `pip3 install torch==1.8.1+cpu torchvision==0.9.1+cpu torchaudio===0.8.1 -f https://download.pytorch.org/whl/torch_stable.html`
    - GPU 버전 : `pip3 install torch==1.8.1+cu111 torchvision==0.9.1+cu111 torchaudio===0.8.1 -f https://download.pytorch.org/whl/torch_stable.html`
  - 튜토리얼 : https://pytorch.org/tutorials/
    - PyTorch Basic : https://pytorch.org/tutorials/beginner/basics/intro.html
    - DCGAN : https://pytorch.org/tutorials/beginner/dcgan_faces_tutorial.html
    - NLP with RNN : https://pytorch.org/tutorials/intermediate/char_rnn_classification_tutorial.html
    - DQN : https://pytorch.org/tutorials/intermediate/reinforcement_q_learning.html

딥러닝 라이브러리 시작하기

- 예제 파일
  - TensorFlow 2
    - MNIST : `mnist_mlp_tensorflow2.py`
    - Go with MCTS : `mcts_go_mlp_tensorflow2.py`
  - PyTorch
    - MNIST : `mnist_mlp_pytorch.py`
    - Go with MCTS : `mcts_go_mlp_pytorch.py` (직접 만들어 보세요!)

감사합니다!

스터디 듣느라 고생 많았습니다.