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## Get Started

1. download dataset to `./data/`
2. unzip dataset to filename `./data/lichess-chess-puzzle-transformed.csv`
3. transform dataset with `python data/transform_data.py` (takes about ~20min)
4. train/test/save a model with `python -m chess_ml.train.Immitation` (takes more than ~20min)

## Filestructure

- chess\_ml
  - data:
  - env:
    - \* Environment.py: env handling board and rewards
    - \* Rewards.py: reward functions
  - model:
    - \* ChessNN.py: base class with wrappers for RL and legal move masking
    - \* FeedForward.py: feed forward implementation of base class
  - train:
    - \* Immitation.py: training routine imitation learning
    - \* Reinforcement.py: training routine reinforcement learning
- data:
  - transform\_data.py: transforms kaggle dataset to labeled dataset

## TODO

- ☐ RL loop
- ☐ Immitation training