Attentional Correlation Filter Network for Adaptive Visual Tracking

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Target Problems
- By using many properties, tracking performance can be improved
- But, needs much time to consider various properties of target

Approach & Contribution
- Attentional Correlation Filter Network
  - Attention Network
    - Predict the module-wise performance
    - Select the attentional modules
  - Correlation Filter Network
    - A lot of tracking modules with different properties
    - Novel properties (flexible aspect ratio, delay etc.)

Experiment
- Implementation
  - Tensorflow (CF-Net) + MATLAB (At-Net) (By socket communication)
  - i7-6900K CPU, 32GB RAM, NVIDIA GTX1070 CPU

Quantitative Results

Analysis
- Parameter Analysis
- Frequency map for various cases

Reference