Video Streaming and Tracking

Homework 3 – Tracking

Deadline: 2022/12/5 23:59

Outline

- Introduction
- Grading Policy
- Hand in Rules

Introduction

- Objective:
  - Implementing visual multiple objects tracking on videos or camera.
  - Track objects that are selected by user.
  - Make sure the tracking model you used is based on transformer.
- Steps:
  - Choose a **transformer-based model**.
    - You can use pre-trained weights or train by yourself.
  - Track the objects appeared in the input source.
  - User can choose objects on the screen and track them with bounding boxes.
  - User can cancel the selection of any objects that were currently under tracking.

Grading Policy (1/2)

- Model implementation – **80 points**
  - Implement model can tracking objects on videos. – 40/80 points
  - Tracking on the objects captured from camera input.– 20/80 points
  - Tracking objects selected by user. – 10/80 points
  - Cancel objects selected by user. – 10/80 points

Grading Policy (2/2)

- DEMO Q&A – **20 points**
  - We will have DEMO in 12/6 & 12/8 at EC637.
  - Please go to Google sheet and fill demo time you prefer.
  - In DEMO, you need to explain your tracking model and the function you implement . **TA will ask some questions about your implementation**.

Hand in Rules

Your submission should contain:

1. **Code** (DO NOT contain pre-trained weights or dataset)

Compress them into one zip file name **HW3_[studentID].zip**

Penalty

- Format penalty – 10 points
  - Submit in wrong name, format, etc.
- Late penalty – 20% per day
  - 1 day => 80%, 2days => 60%.....
- You can use any code from Github, but **DO NOT** copy from your classmate!

References

- TransTrack : https://github.com/PeizeSun/TransTrack
- TrackFormer : https://github.com/timmeinhardt/trackformer