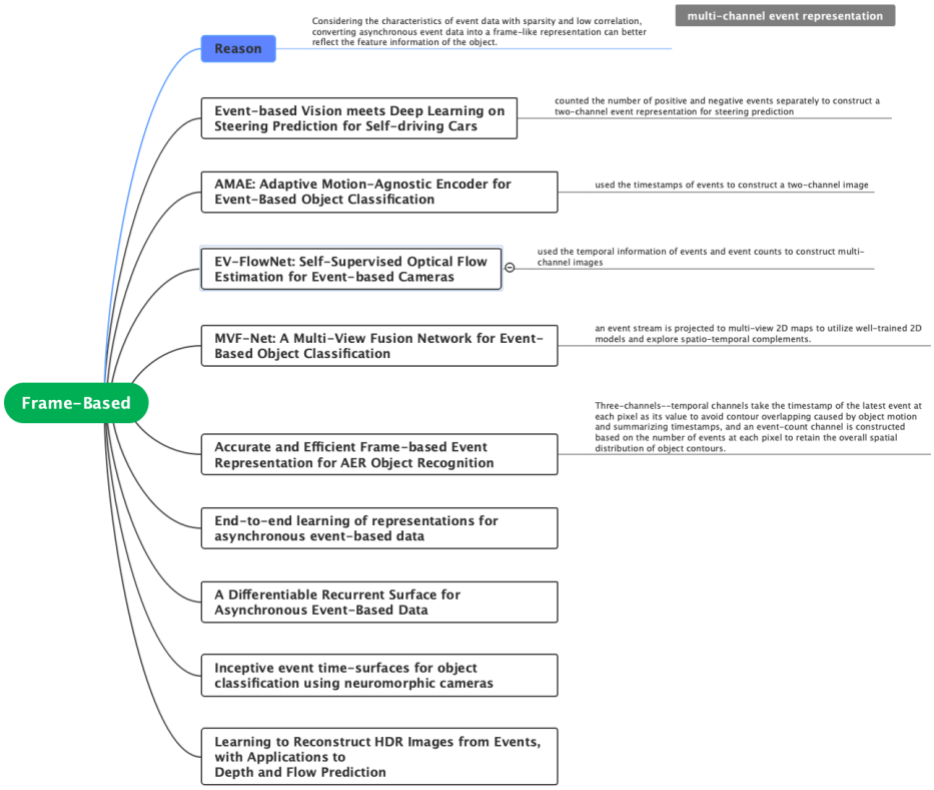
Weekly Report

08/01/2023

Things completed in the last week:

1. Organized the articles related to Frame-based event representation, and sorted out the mindmap (this is the first draft, and the follow-up supplements are in the research notes:



And made reading notes based on frame-based representation for each related article, here is the AMAE model as an example:

> “AMAE: Adaptive Motion-Agnostic Encoder for Event-Based Object Classification” (Deng 等, 2020, p. 4596)
>
> used the timestamps of events to construct a two-channel image, weighting recent events with higher value, and introduced an adaptive motion-agnostic encoder to accomplish the object classification task
>
> 这个面对的问题是 由于使用不同运动轨迹提取的 event 特征会有不同的语意特征，所以相同对象也可能被分到不同类别中
>
> “event signals are integrated into frame-based representations, specifically, timesensitive tensors (Tp), according to their timestamps for different polarities.” (Deng 等, 2020, p. 4596) 根据不同极性的时间戳，事件信号被集成到基于帧的表示中，特别是时间敏感张量 (Tp)。
>
> 每个event 本身包含的信息量少，并且没有和 adjacent events 想关联
>
> “N events from the time interval τ are accumulated on the two channels framebased tensor Tp in terms of the timestamps of event signals.” (Deng 等, 2020, p. 4598)
>
> “Hence, we stress impacts from recent events by weighting recent events with high values.” (Deng 等, 2020, p. 4598)
>
> the weighting mechanism still corrupts original information of the event stream to a certain extent, which is not conducive to constructing complete and clear contours of the object -- 缺点

2. Completed the writing of the Frame-based event representation part, and modified it based on Xu Zheng's comments, and added the frame-based content to the table in the event representation part.
3. Organized the papers related to stream-based event representation, but haven't read them completely yet and haven't sorted out the mindmap.
4. In terms of VI-ReID, I have read and researched the papers and models of MITML, UCDIR and OTLA, and now I have a basic understanding of the adversary network.

Plan for next week:

1. Complete the paper writing of the stream-based part.
2. Read and revise the whole event survey.
3. In terms of VI-ReID, try to build the model part of our proposed adversary network.