

## A. Supplementary Material

### A.1. Labeling Instructions

We show our labeling instructions for the annotation task of anomalous events with a start and end frame in Fig. 1.

#### Labelling Protocol for Underwater Event Annotation

**Objective:** To consistently annotate the **start**, **end**, as well as the **key** moment of a key activity within short underwater video clips.

#### Labelling Task Overview

- Each video contains **one main biological event**.
- Watch the video fully to understand the context.
- Review frame-by-frame to identify:
  - Start Frame:** When the event begins.
  - End Frame:** When the event ends.
- If there is no clear event, choose the most plausible one.
- Do not annotate multiple events — focus on **only one main activity**.

#### Keyboard Controls

- Space** — Play / Pause video
- / ←** — Step forward/backward at video speed
- S** or **1** — Set **Start Frame** (green)
- E** or **3** — Set **End Frame** (red)
- Enter** — Save annotations and go to next folder

Figure 1. A screenshot of the labeling instructions for our annotation task in AnomaTag.

### A.2. Parameter Sweep

We show average temporal IoU performance across all parameter settings, which is *relative height* for find-peak and  $\tau$  for thresholding in Fig. 2.

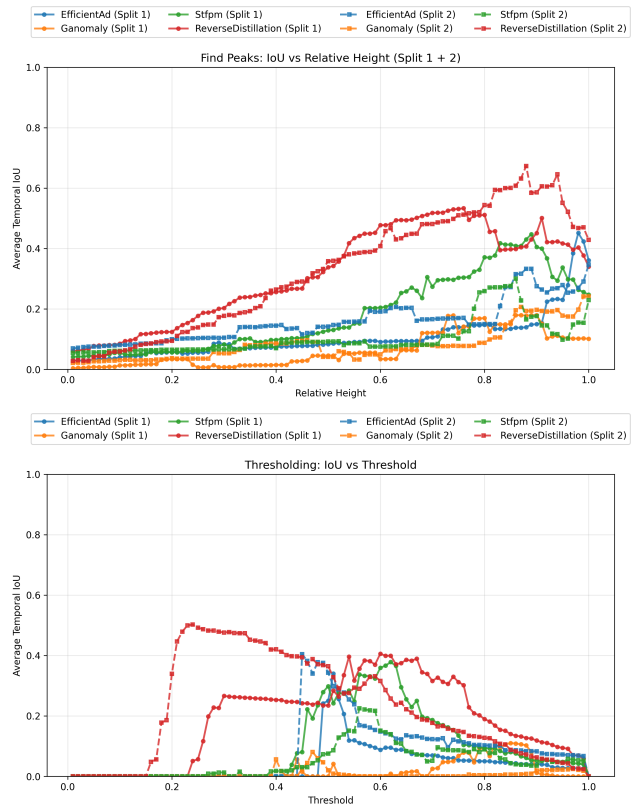


Figure 2. Average temporal IoU performance across parameter settings for peak-finding (top) and thresholding methods (bottom) per data split. Performance is averaged across videos for each parameter value.