Hovering Hummingbird Automated Segmentation
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Motivation
Hummingbirds are well equipped for hovering flight, and past studies have used image analysis to analyze the kinematics of their flapping motion [1], [2]. These studies had the benefit of using multiple cameras to pinpoint motion. In this study, video taken with a single camera view is analyzed through segmentation with the future goal of using this information for kinematic analysis of tail oscillation. While past studies have used techniques such as normalized cuts [3] and mean shift [4] for image segmentation, here the movement between consecutive frames is primarily utilized because the backlighting of some videos does not allow for segmentation of single frames.

References