

Optical Flow FlowNet

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1 · Introduction

This document presents the development of a model to estimate vehicle velocity using a single camera. The model is based on the Optical Flow FlowNet architecture.

Optical flow is employed because, from the perspective of a fixed camera, the motion of objects in a scene can be represented as a flow field. Optical-flow methods estimate object motion from sequences of images by tracking consistent changes in pixel intensity over time. As an illustration, Figure 1 shows an example of a typical visual representation of optical flow, taken from the article [Optical Flow with RAFT](<https://medium.com/data-science/optical-flow-with-raft-part-1-f984b4a33993>).



Figure 1: Optical Flow Example