

# Computation of Optic Flow using Neural Networks

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October 19, 2017

## **Abstract**

Optic Flow Computation has been dominated by approaches based on Variational methods so far. Neural Networks is already dominating high level computer vision tasks such as Classification, Object Detection, Object Recognition, Image Segmentation. There are not much attempts on using Neural Networks for the task of Optic Flow, because of the underlying differences in the task compared to the other previous tasks. The two major differences are the contracting nature of Convolutional Neural Network architecture and the task demanding network to learn patterns in displacements of pixels/structures between the images. FlowNet is the first CNN architecture which found some degree of success in solving the task. My goal in this thesis is to understand possibilities of Neural Network in this task by analyzing FlowNet and proposing some changes to reach better results with Neural Networks.