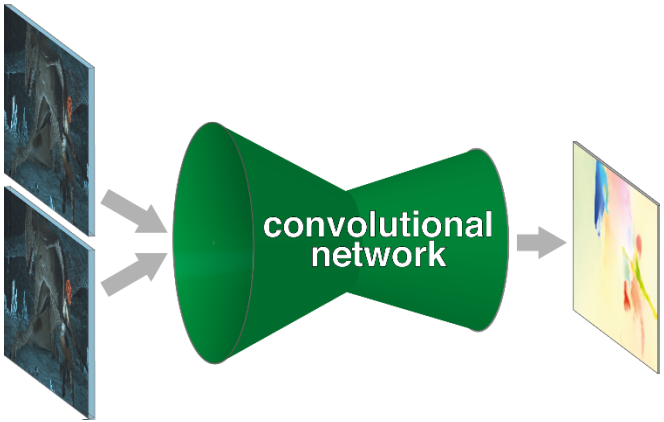

FlowNet

Optical Flow with Convolutional Networks

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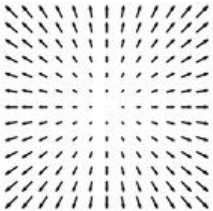
`lmb.informatik.uni-freiburg.de`

Optical Flow

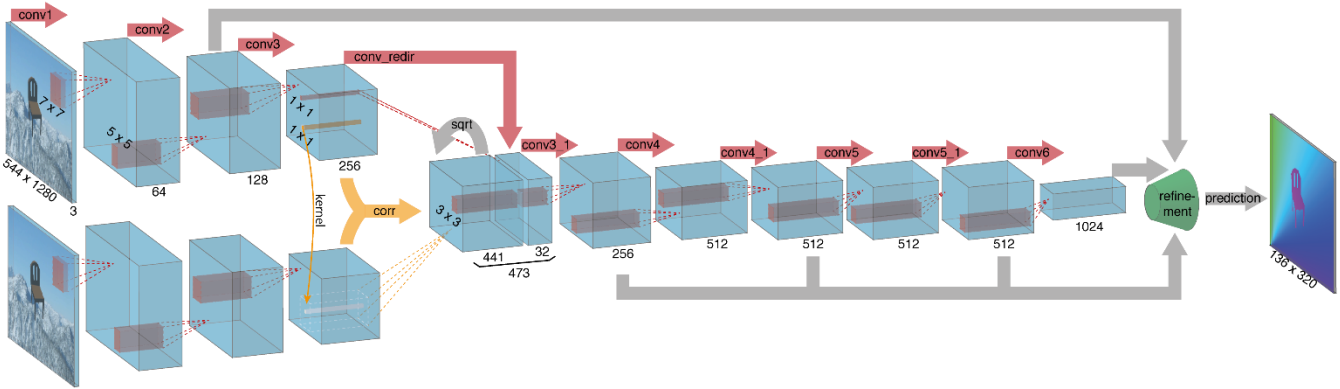


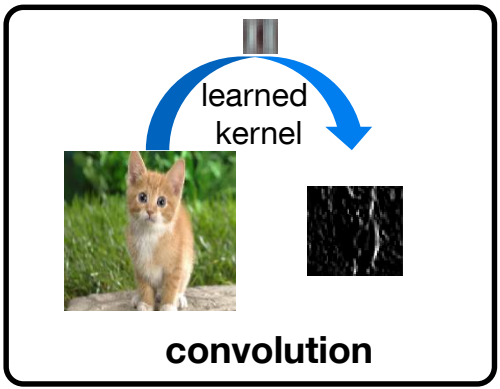
Optical Flow

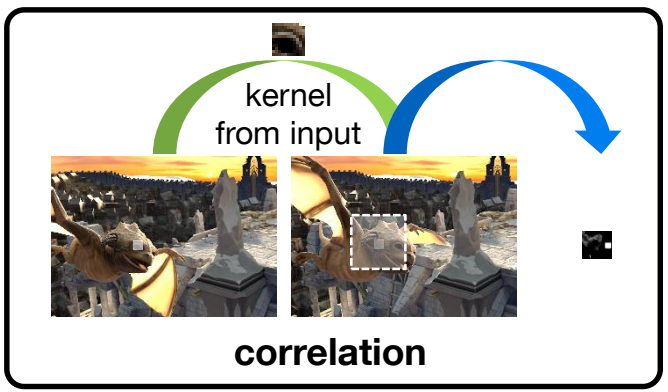
Brightness Constancy Assumption

$$\arg\min_{\vec{v}} \int_{\Omega} \| I_0(\vec{p}) - I_1(\vec{p} + \vec{v}) \| \, \mathrm{d}^2 p$$

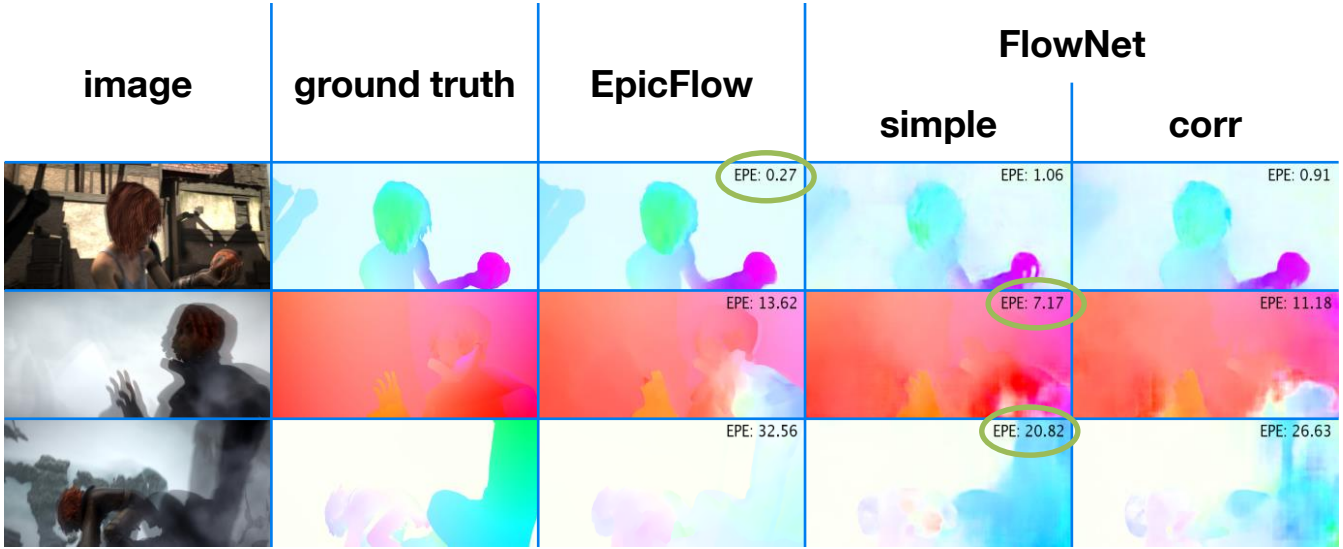
Novelty: FlowNet







FlowNet: Performance



- first end-to-end convolutional network to learn optical flow
- competitive accuracy (endpoint error)
- real-time capable (10 fps @ 384x512 px)