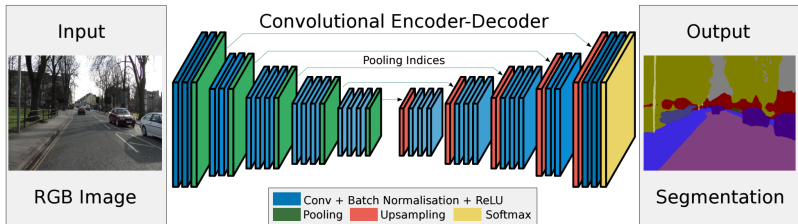


SegNet: A Deep Convolutional Encoder-Decoder Architecture for Image Segmentation

V. Badrinarayanan, A. Kendall, R. Cipolla (ARXIV 2015)



- **Motivation:** Need to design an architecture for scene understanding which is efficient in terms of memory & computational time
- **Contributions:**
 - Proposes novel manner in which the decoder upsamples its lower resolution input feature map
 - The decoder uses pooling indices computed in the max-pooling step of the encoder to perform non-linear upsampling
 - This eliminates the need for learning to upsample and significantly smaller number of trainable parameters
- Evaluates on CamVid road scene segmentation & SUN RGB-D indoor scene segmentation