Hybrid Quantum-Classical Neural Network for Semantic Segmentation

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- Use a hybrid quantum-classical neural network for classifying the road in an image taken from the viewpoint of a car
- Hybrid neural network will run through a Segnet with a VGG-16 encoder but the final Softmax layer for the decoder will be a quantum circuit
- Current Segnet with classical Softmax layer and 12 classes has a frequency-weighted IU of .751, mean IU of .420
- Will compare classical Segnet result to hybrid neural network

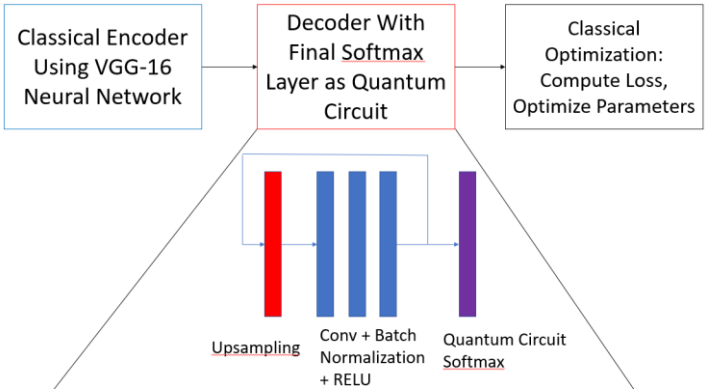

Fig 2: Structure of Hybrid Segnet

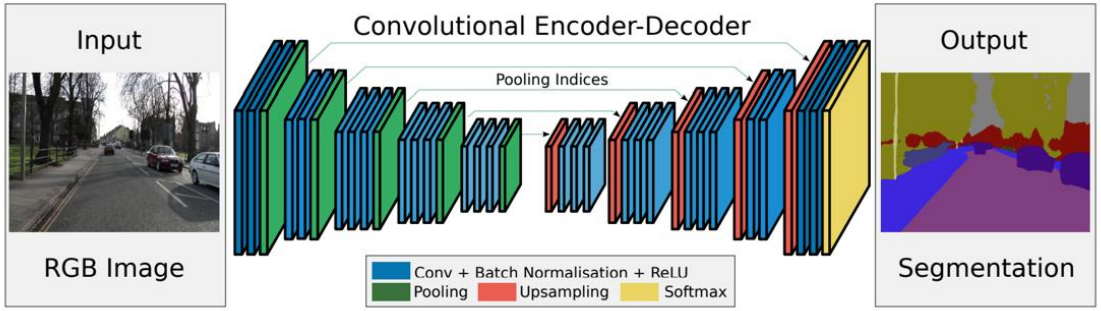

Fig 1: Diagram of Classical Segnet
From: arXiv:1511.00561

Fig 3: Result from VGG-16 Classical Segnet

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