Hypothesis & Experiment Design

John Robinson

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* Hypothesis

Determine optimum filter size for a facial recognition CNN using varying filter sizes. A 3x3 filter will yield a higher accuracy than a smaller or larger filter size.

* Experiment

Develop and train a facial recognition CNN using the UTKFace dataset with varying filter sizes to determine which filter size is optimum for facial recognition for the trained CNN using 2-3 convolution layers and 2-3 hidden layers in classification stage of neural network. Uses ReLU between convolution layers and will be testing effect of padding vs not padding with dataset. To be tested with sigmoid and tanh activation functions in fully connected layer.