Replication of the Performance of Image Classification Algorithms

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Abstract

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Image classification and face recognition has been a rapidly developing data science subject matter for the last decades already. The interest in it stems from its enormous practical applicability in numerous areas of life like medicine and public safety, or another sciences like physics, astronomy, archeology and many others. As the images are high-dimensional data objects, the algorithms in the direction are *dimensionality reduction* models that precede a classification with a preferred algorithm.

On the other side we consider the so called *replication crisis*, in which many scientific studies are difficult to reproduce or not replicated or further challenged.

In this work we code some image classification algorithms. We evaluate their performance under the same conditions and compare them to the experimental results in the original articles. Also, we test if the image reconstructions (for a certain equal dimensionality) of the better algorithms will be also better recognizable to the naked eye.

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