

One shot face recognition using Siamese Network

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Problem statement

Deep Neural Networks are successful at learning on really complex data sets, but they **need large training datasets** of the same object to be effective.

In many cases, the **data available** from a given class is **limited** and that makes it difficult to do recognition or verification tasks. For example, face recognition.

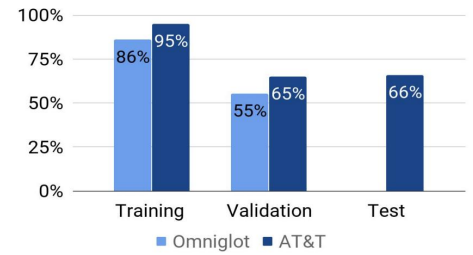
If we want to build a **face verification system** of a company, we might have just one image per employee. However, we can train a **one shot learning model** on a huge dataset of faces and then use this employee image for verification.

Data set

We used 2 datasets:

- **Omniglot** contains 1623 different handwritten characters from 50 different alphabets.
- **AT&T** database of Face - contains ten different images of each of 40 distinct subjects.

Results



Architecture

