

POVa – Face verification using CNNs

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Face Verification



Decision
(Probability/Distance)

Used CNN architectures

- Architectures
 - ResNet
 - Basic - 24 layers - five blocks with two convolutional layers followed by max pooling layer and dropout
- Crossentropy
- ReLU activations
- Keras

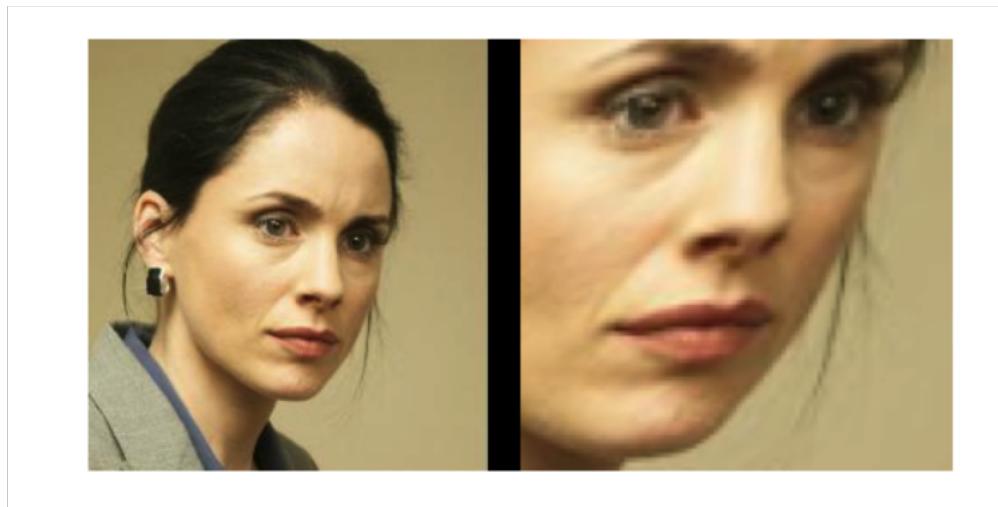
Data

- Training
 - CASIA-WebFace – 500 000 images / 10 000+ people
- Validating
 - 5 images from each person
- Testing
 - CASIA-WebFace Test Set – people who had less than 15 images
 - LFW database

Huang, Gary B., et al. "Labeled faces in the wild: A database for studying face recognition in unconstrained environments." Workshop on faces in 'Real-Life' Images: detection, alignment, and recognition. 2008

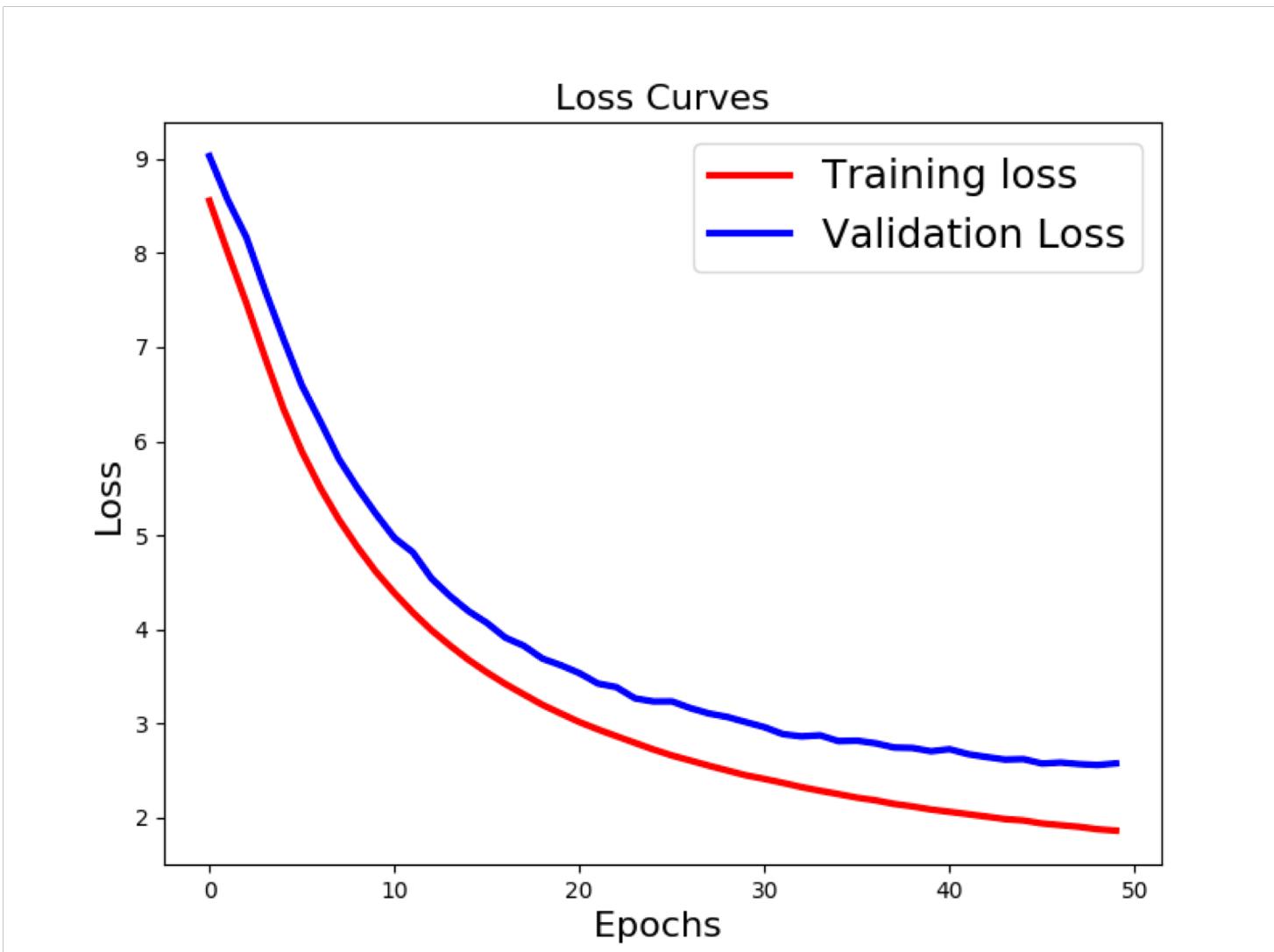
Data Preprocessing

- Openface library
 - Face detection (find boundary box)
 - Face alignment

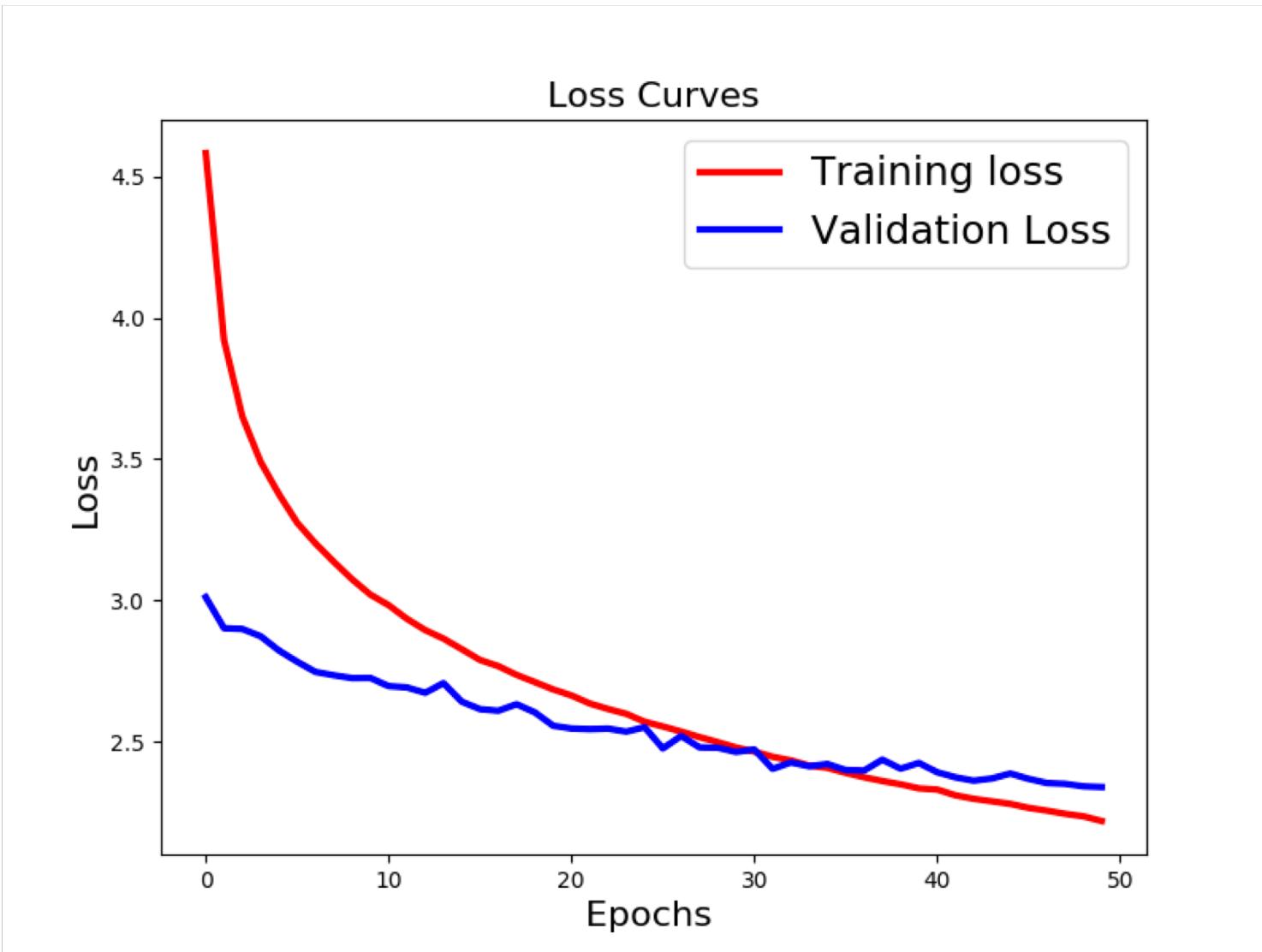


Amos, Brandon, Bartosz Ludwiczuk, and Mahadev Satyanarayanan. "Openface: A general-purpose face recognition library with mobile applications." CMU School of Computer Science (2016)

Basic model – Loss curves



Data augmentation



ROC

