Lab. 1: Analyse et préparation des données et extraction de primitives

GTI771 – Apprentissage machine avancé

Hiver 2021

Prof. Alessandro Lameiras Koerich
Département de génie logiciel et des TI
École de Technologie Supérieure
Université du Québec

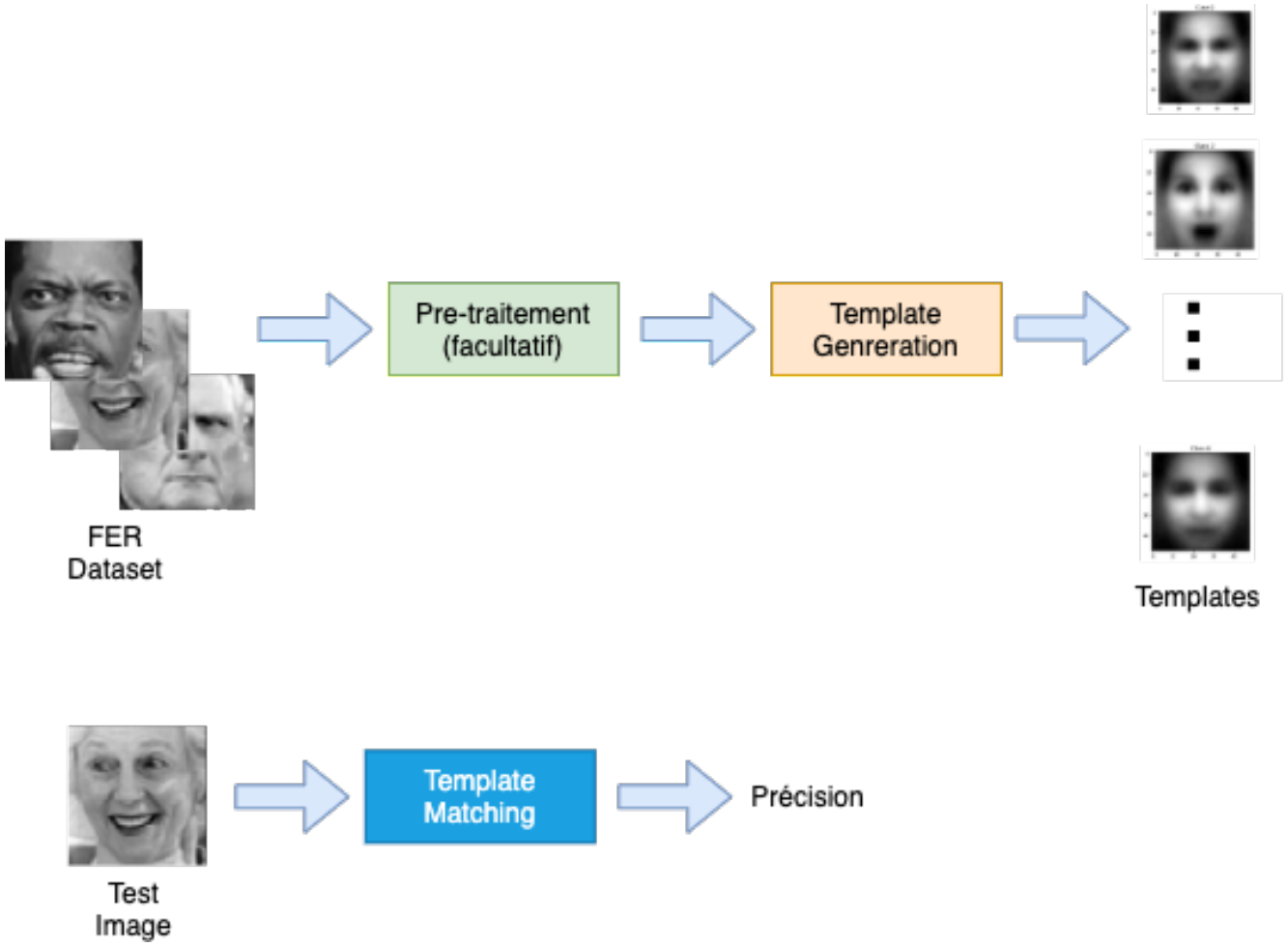
ÉTS
Le génie pour l'industrie

FER Dataset

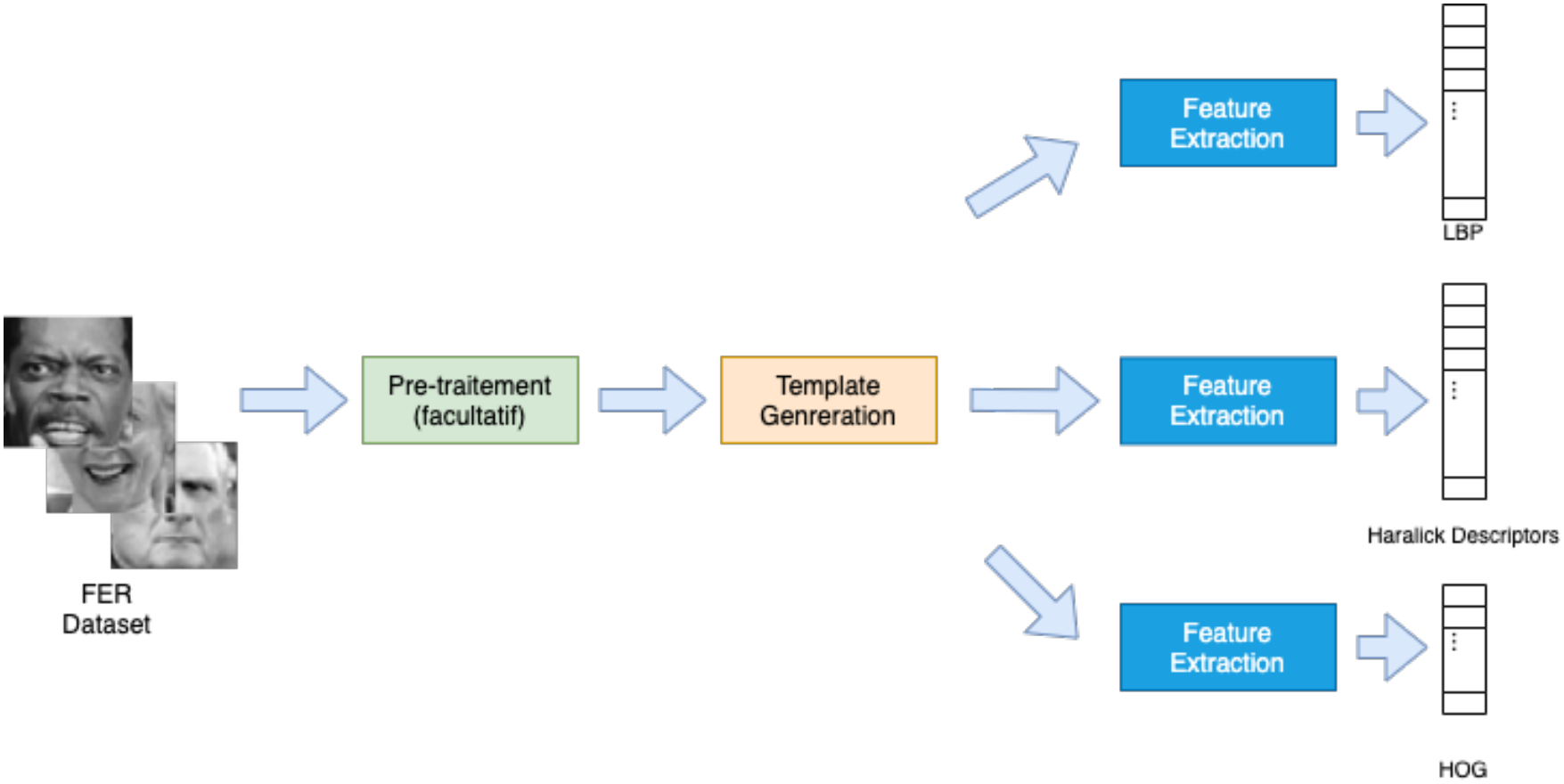
- Facial Expression Recognition (FER) dataset
- 48x48 pixel grayscale images of faces.
- The faces have been automatically registered so that the face is more or less centered and occupies about the same amount of space in each image.

- The task is to categorize each face based on the emotion shown in the facial expression in to one of seven categories (0=Angry, 1=Disgust, 2=Fear, 3=Happy, 4=Sad, 5=Surprise, 6=Neutral).
- Training set: 28,709 examples. Validation set: 3,589 examples. The final test set: 3,589 examples.

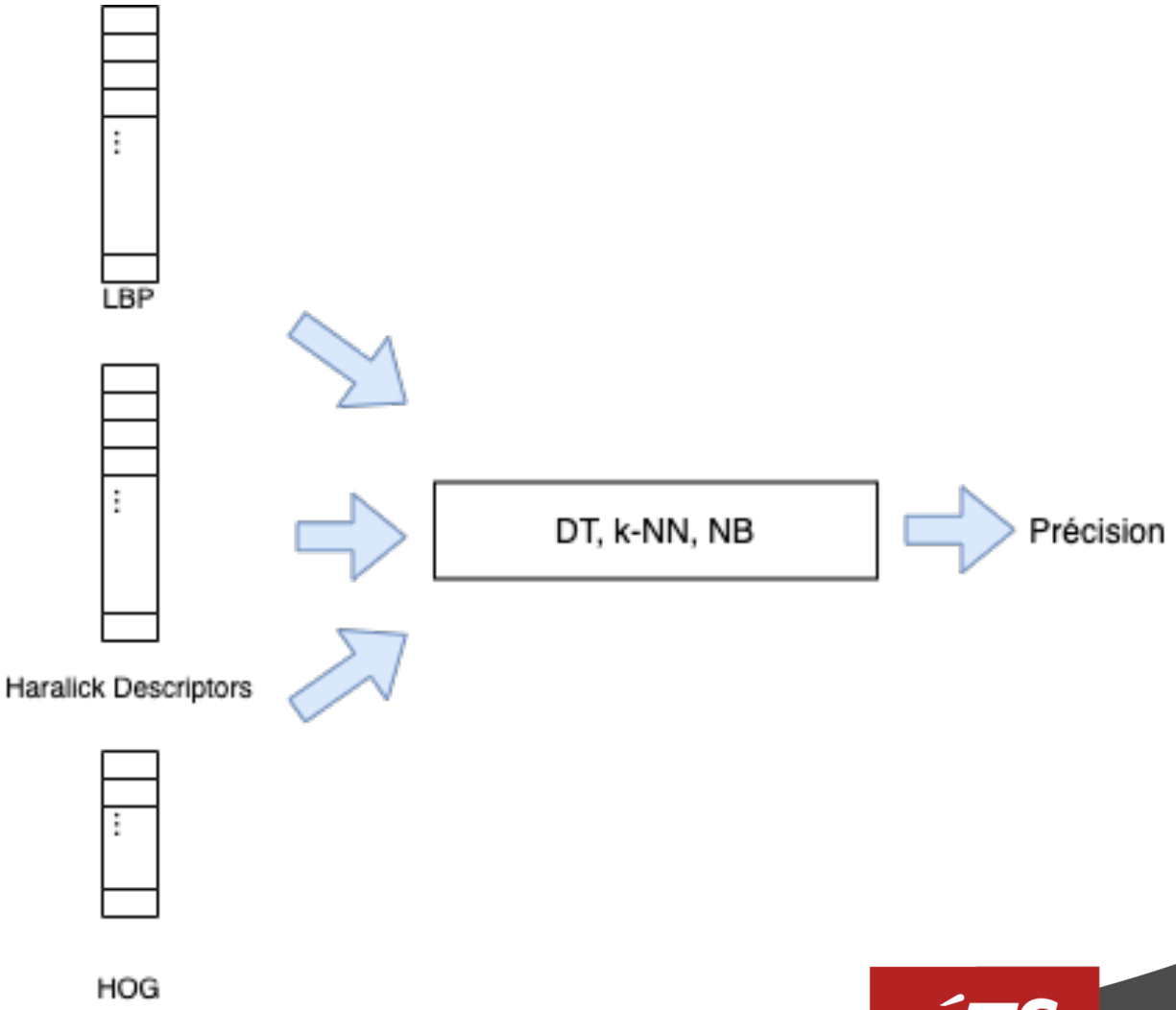
Partie 2: Template Matching



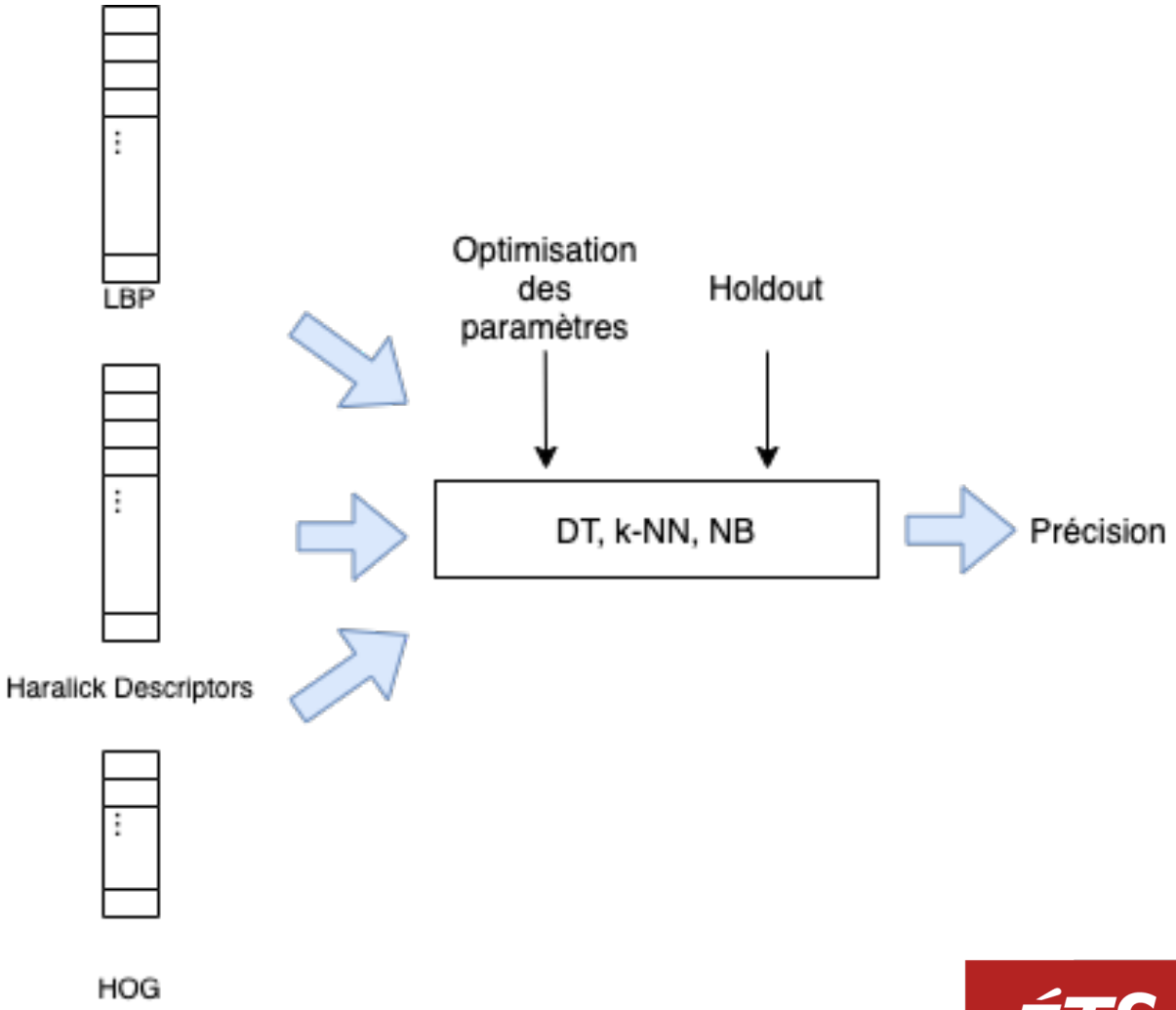
Partie 3: Extraction de primitives



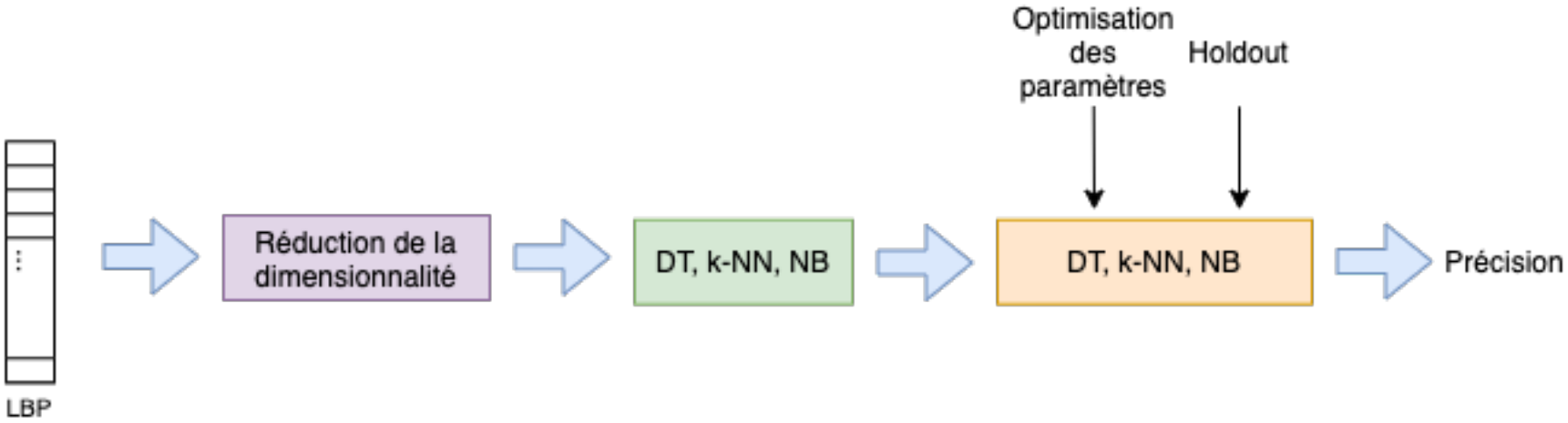
Partie 4: Construction d'un modèle



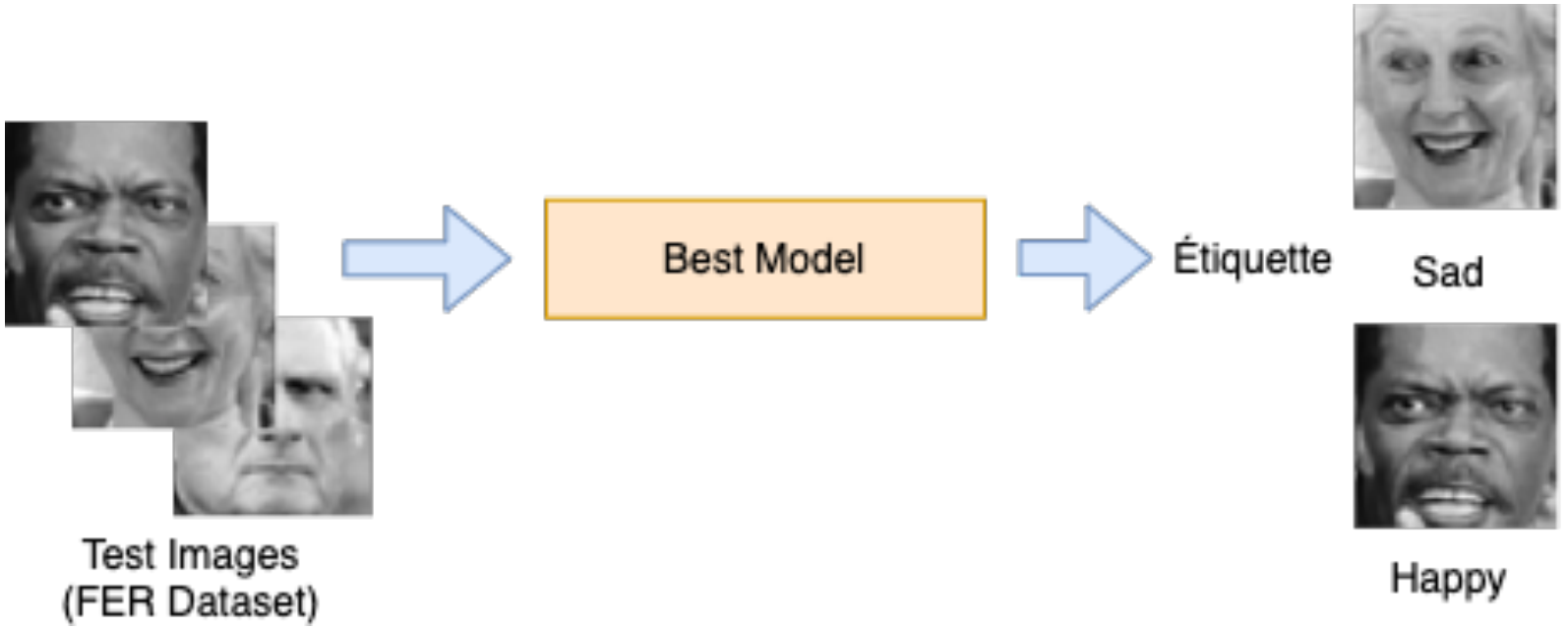
Partie 4: Réglage du modèle



Partie 5: Réduction de la dimensionnalité

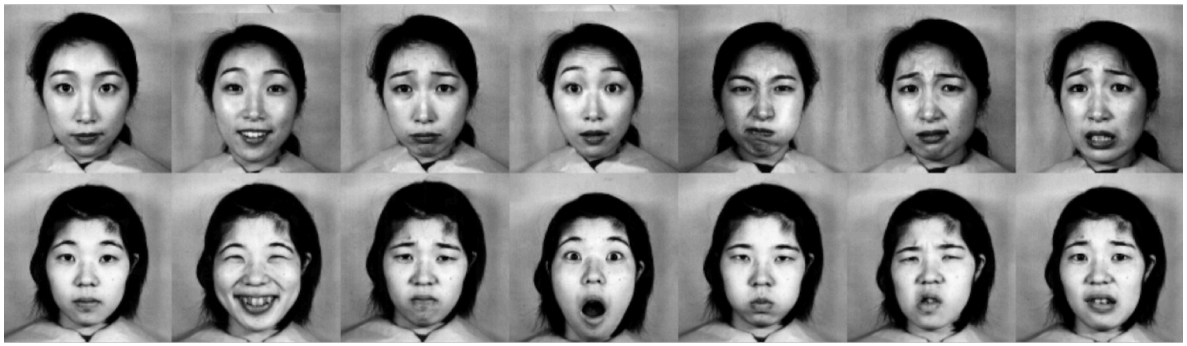


Partie 6: Visualisation des exemples (bien et mal classifiés)



Jaffe Dataset

- The Japanese Female Facial Expression (JAFFE) Dataset
- 10 Japanese female expressers
- 7 Posed Facial Expressions (6 basic facial expressions + 1 neutral)
- 213 images (Several images of each expression for each expresser)
- Resolution 256x256 pixels, 8-bit grayscale.



Partie 7: Défi Cross-Dataset