



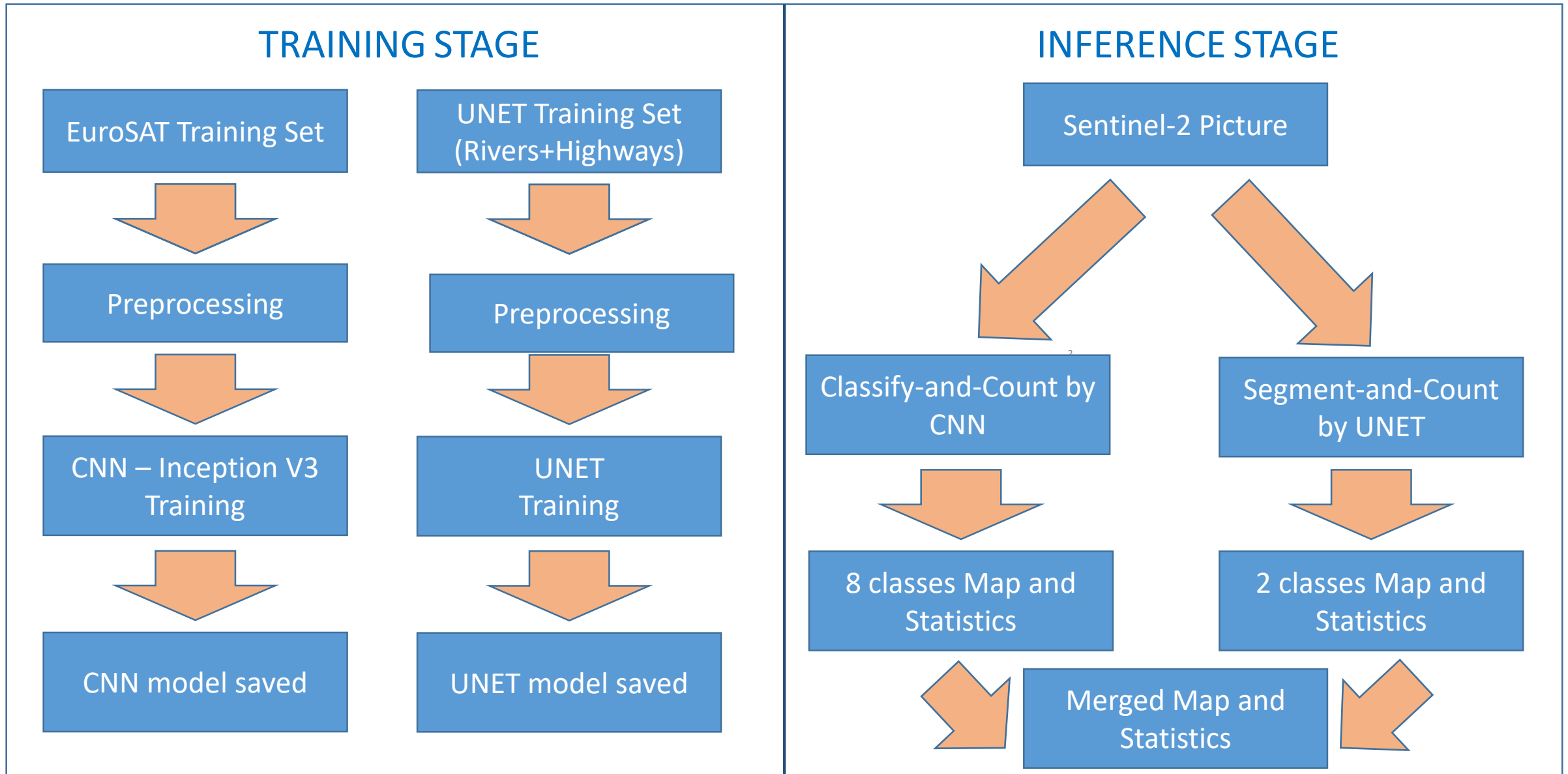
Land Cover Pipeline

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Francesco Pugliese, Mauro Bruno, Monica Scannapieco

**Istat – DCME
MEC**

18 Febbraio 2022

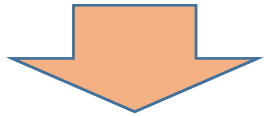
Land Cover System – Pipeline Architecture



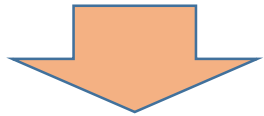
Land Cover System – Pipeline Architecture

TRAINING STAGE

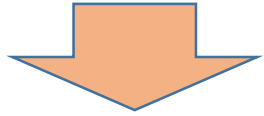
EuroSAT Training Set



Preprocessing



CNN – Inception V3
Training



CNN model saved

Input:

EuroSAT_RGB_tci – 146 Mb (JPG) – 30046 files

EuroSATAllBands – 2.8 Gb (TIFF) – 27042 files

landcover_run.py –c conffile.ini –m mode [0,1,2,3,4], Init.py, Settings.py

Input: **EuroSAT4Bands**

lc_preprocessing.py, data_loading.py

Es. Output:

Training Set: Es. **Training_EuroSAT4Bands** – 288 Mb - 16534 files

Validation Set: **Validation_EuroSAT4Bands** – 96 Mb – 5534 files

Es. Input:

Training Set: Es. **Training_EuroSAT4Bands**

Validation Set: **Validation_EuroSAT4Bands**

lc_training.py, advanced_cv_model.py, utils.py

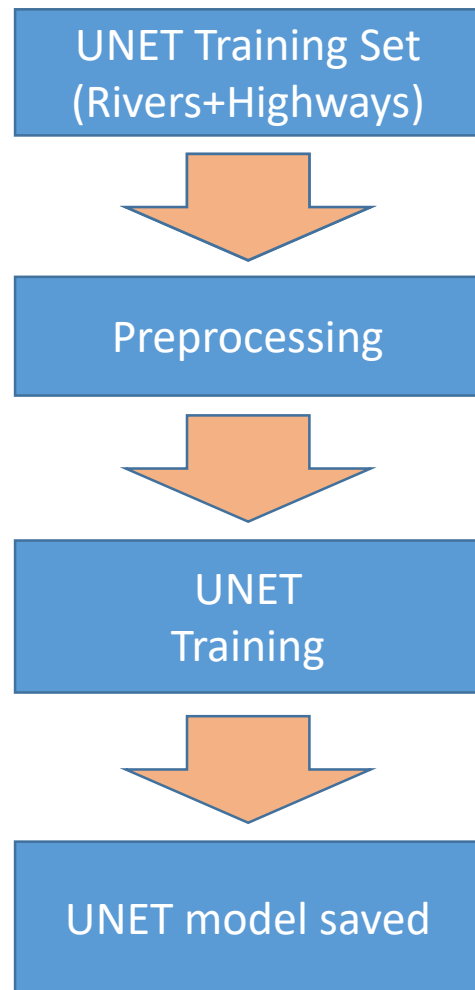
Es. Output:

Trained Model: Es.

tesla_v100_linux_139_height_500_epochs_model_inception_InceptionRGB_4B.hdf5

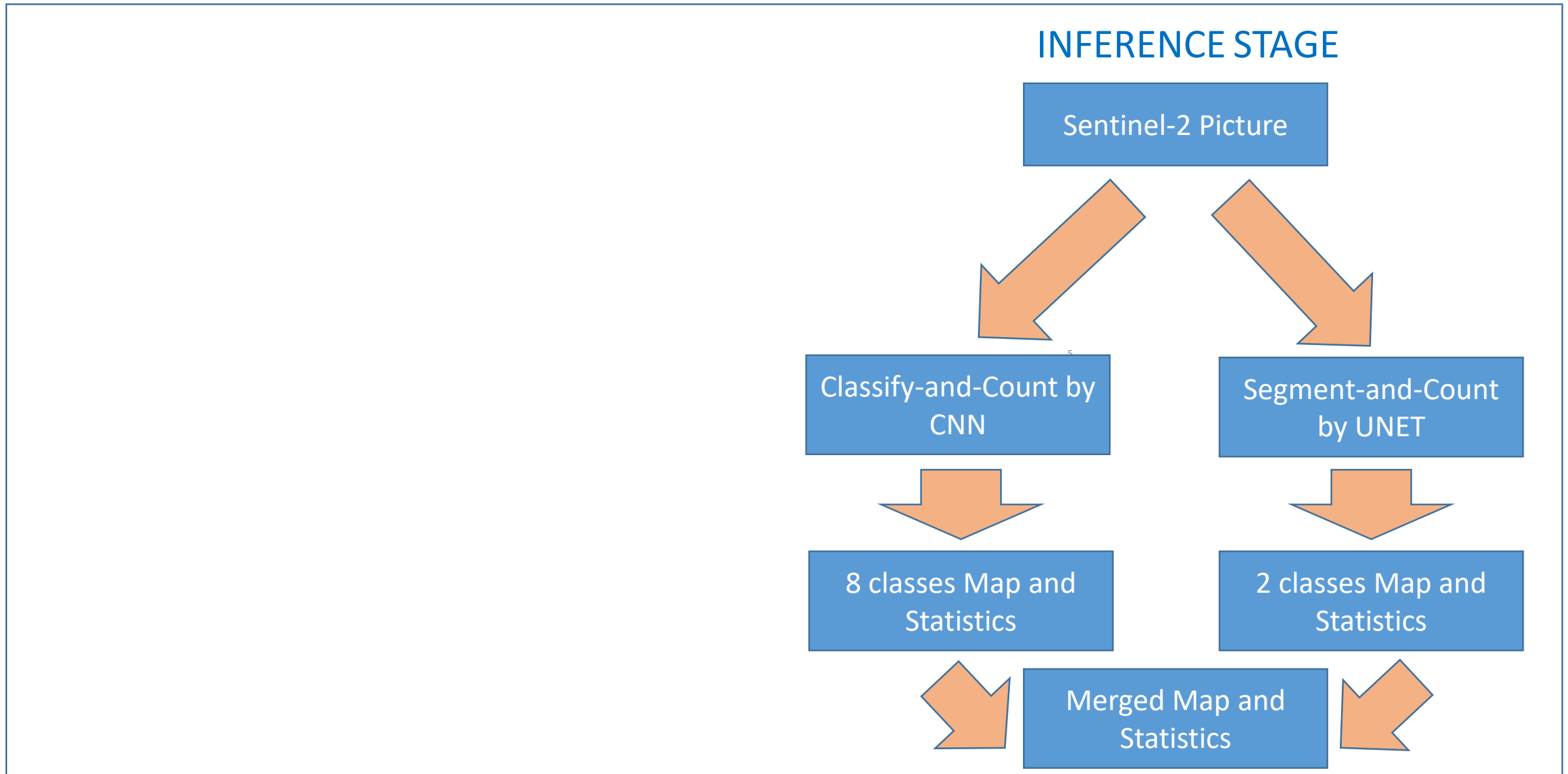
Land Cover System – Pipeline Architecture

TRAINING STAGE



4

Land Cover System – Pipeline Architecture





Thank you for your attention
