TrackingSwimmingENPC

- data/ — Every file that is liked with the data
  - 1_raw_videos/ — Raw videos
  - 2_intermediate_top_down_lanes/
    - calibration/ — Calibration file
    - lanes/
      - "video_name"/ — All the lanes of every frame
  - 3_processed_positions/ — Pointing files
    - flip_changes/ — Flip file
  - 4_models_weights/ — Trained weights
  - 5_model_output/ — Every videos created by the src folder
- reports/ — Every graphs to witness the model's performances
  - figures_results/ — Graphs that represents the metrics during training
  - graphic_results/ — Graphs that represents the time according to the swimmer's position
  - trade_off_results/ — Graphs that represents the metrics according to the trade_off
  - calibration.pdf — Notice of the calibration file
  - pointing.pdf — Notice of the pointing file
- src/ — The code
  - d0_utils/
  - d4_modelling_neural/
    - loading_data/ — Load and transform the lanes
    - sample_data/ — Sample the lanes
    - loss.py — The loss of the model
    - metrics.py — The metrics for the model
    - trade_off_manager.py — To manage the trade-off
    - zoom_model.py — Simple neural network
    - zoom_model_deep.py — Deeper neural network
  - d4_modelling_rough/ — Code for the tracking without using neural network
  - d5_model_evaluation/ — Evaluate the model
  - d7_visualization/ — Manage the visualisation and the graphics
  - d1_raw_video_summary.py — Fill the list_video.txt file
  - d2_intermediate_calibration.py — Fill the calibration file
  - d2_intermediate_lanes.py — Construct the lanes
  - d3_processing_flip_images.py — Fill the .csv files with the pointing label
  - d3_processing_head_pointing.py — Enable the user to point at heads
  - d4_modelling_neural_magnifier.py — Train the neural network
  - d4_modelling_rough.py — Code for the tracking without using neural network
  - d5_model_evaluation_magnifier.py — Evaluate the model
  - d6_reporting_pointing.py — Compute the differences between two pointings
  - d7_visualization_label.py — Create a video with the labels
  - d7_visualization_magnifier.py — Create a video with the predictions
- add_data_flip.py — Add the *swimming_way* label
- create_data_set.py — Create the calibratation and the pointing file
- neural_tracking_train.py — Train the neural network
- neural_tracking_tune_trade_off.py — Tune the trade-off
- observe_model.py — Create the visualisation and the graphics
- rough_tracking.py — Track the head without neural network