

IET SMP 2021-Computer Vision



Welcome Guys!!!

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MTCNN

- Abbreviates to Multitask Cascaded Convolutional Neural Networks.
- A very fast and accurate face detection model available out there.
- Identifies features such as each of the eyes, nose, mouth and the face itself.
- Based on the Research paper called **Joint Face Detection and Alignment using Multi-task Cascaded Convolutional Networks** .

MTCNN contd.

- Major Advantage is that it computes the result desirably fast even if a normal CPU is used.
- Available to use as a python library

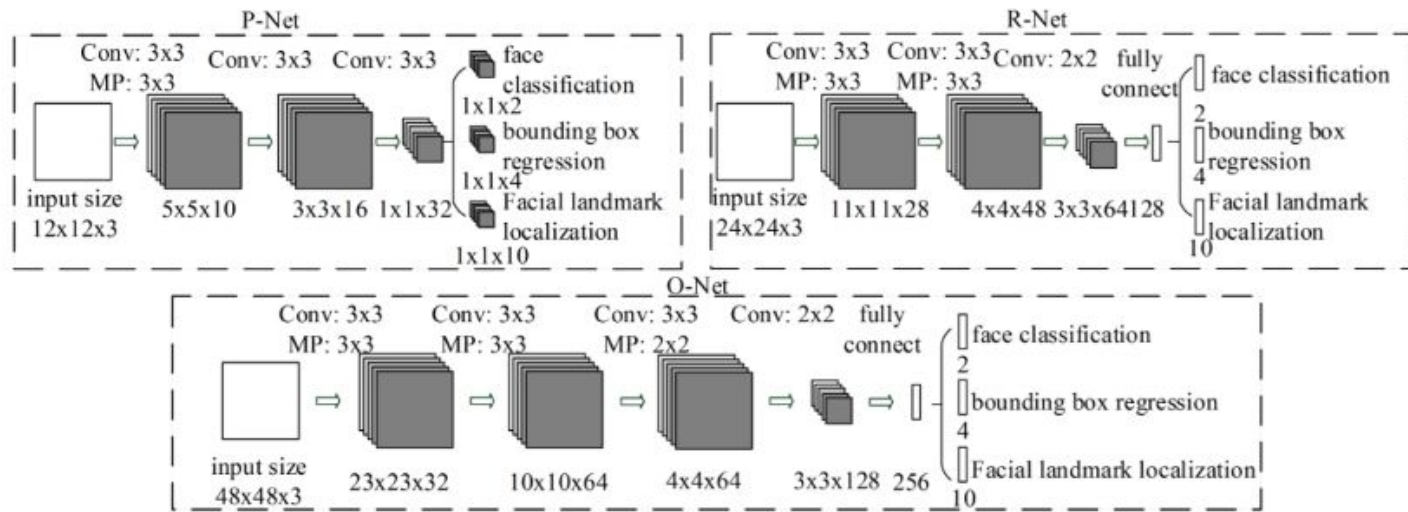
To install the MTCNN Library

pip install mtcnn

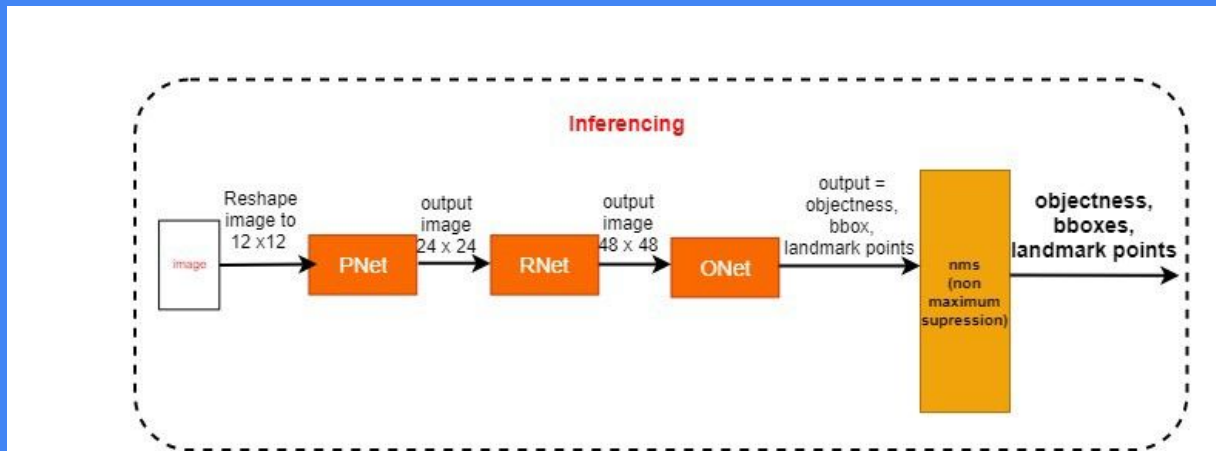
- Documentation Link: <https://pypi.org/project/mtcnn/>

How does MTCNN Work

- Works in three steps.
- Has three neural networks named: proposal network, refine network and out network



MTCNN Architecture



Three networks of mtcnn

Pnet: This stage is responsible for proposing different regions of faces to the next stage.

Rnet: RNet (Refine Net) is responsible for refining the proposed boxes from predicted from PNet.

ONet uses both PNet & RNet before taking the output of RNet as input for final prediction.

Let's head over to Jupyter
Notebook

Thank You Guys!!