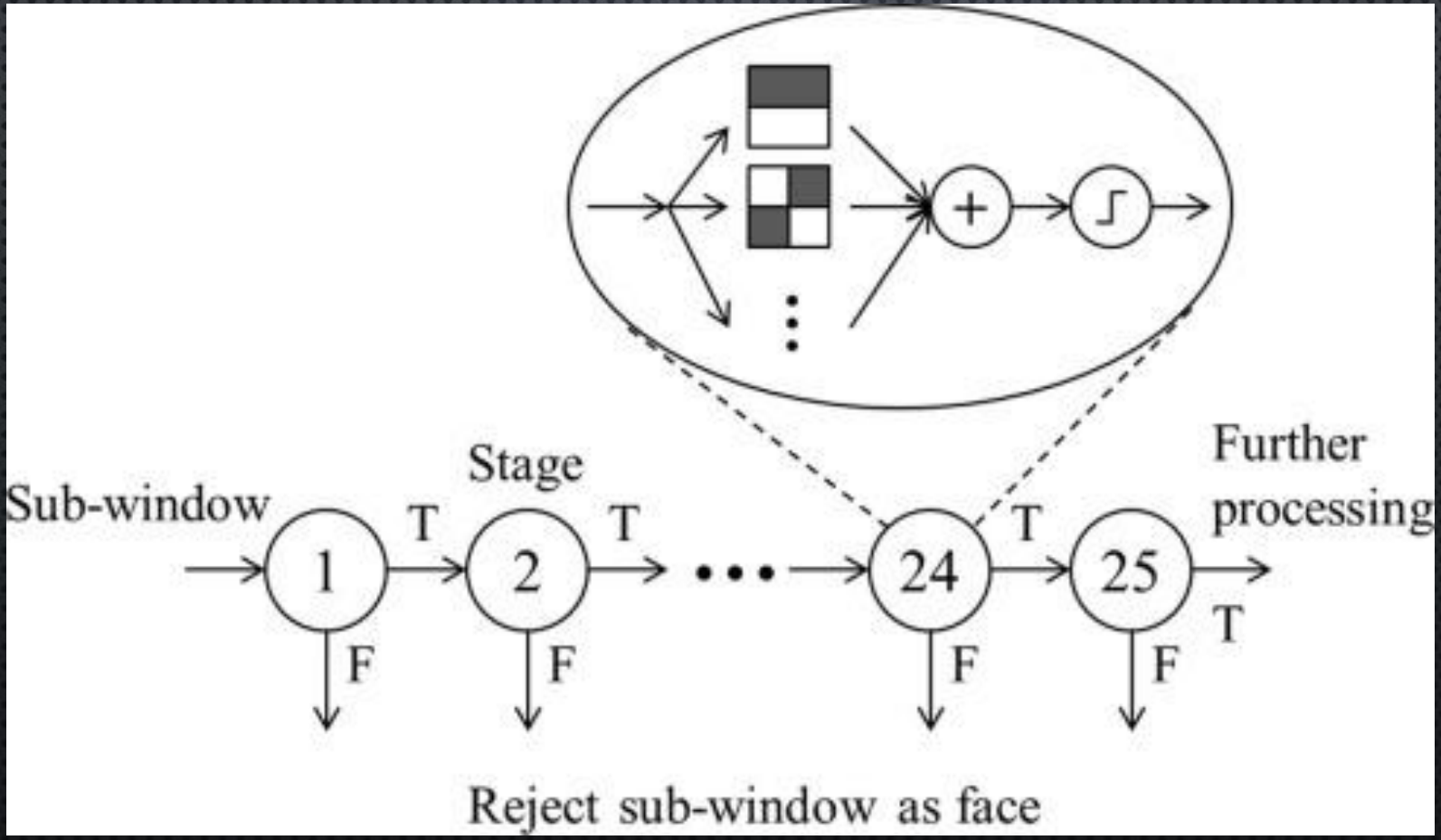
IMAGE PROCESSING WORKSHOP

FEB 2018

SLIDE 7:

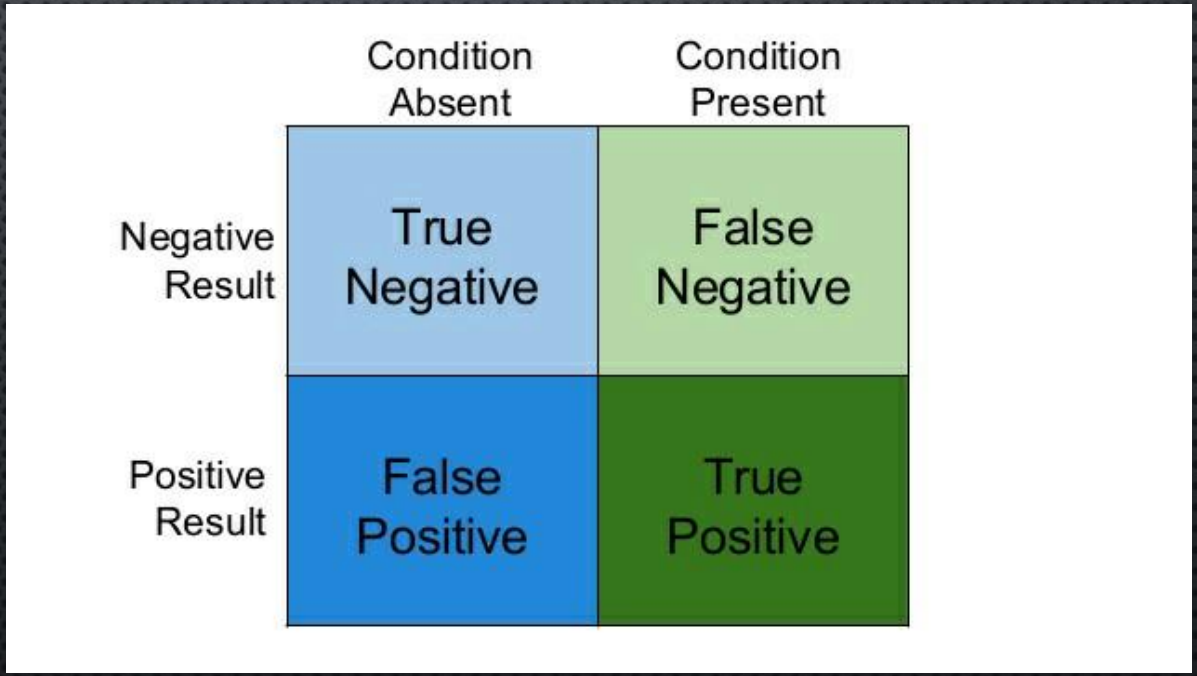
TRAINING CASCADE DETECTORS IN MATLAB

WHY ARE CASCADE DETECTORS FAST?



WHAT COULD OCCURE?

- TRUE POSITIVE
- TRUE NEGATIVE
- FALSE POSITIVE
- FALSE NEGATIVE



WHAT CONSIDERATIONS?

Condition	Consideration
A large training set	Increase the number of stages and set a higher false positive rate for each stage.
A small training set	Decrease the number of stages and set a lower false positive rate for each stage.
To reduce the probability of missing an object.	Increase the true positive rate. However, a high true positive rate can prevent you from achieving the desired false positive rate per stage, making the detector more likely to produce false detections.
To reduce the number of false detections.	Increase the number of stages or decrease the false alarm rate per stage.

Design Parameters

- Feature Type
- Supply Positive Samples
- Supply Negative Samples
- Choose the number of stages
- Train and Troubleshoot

Training a Cascade Detector

- Ok, let's see some code.