



ATM Surveillance

**Delhi Technological University
(Formerly Delhi College of Engineering)**

October'18

Banks That Saw Highest Number of Thefts/Robberies



April 2014-March 2017

Source: Parliament Answer • Created with Datawrapper

CURRENT SITUATION

According to Reserve Bank of India, in first 6 months of 2017, Karnataka saw miscreants steal eight times the money it had lost in the whole of 2016-17.

CAUSE

Account debited but cash not received
Multiple withdrawals by the same person in a single day- not detected
Manual monitoring- monotonous task
No real time action in case of abnormal activity
ATM Skimming

AIM

REDUCE MANUAL MONITORING

RESPOND IN REAL TIME

ACTIVITY TRACKING

WEAPON DETECTION

FACE RECOGNITION





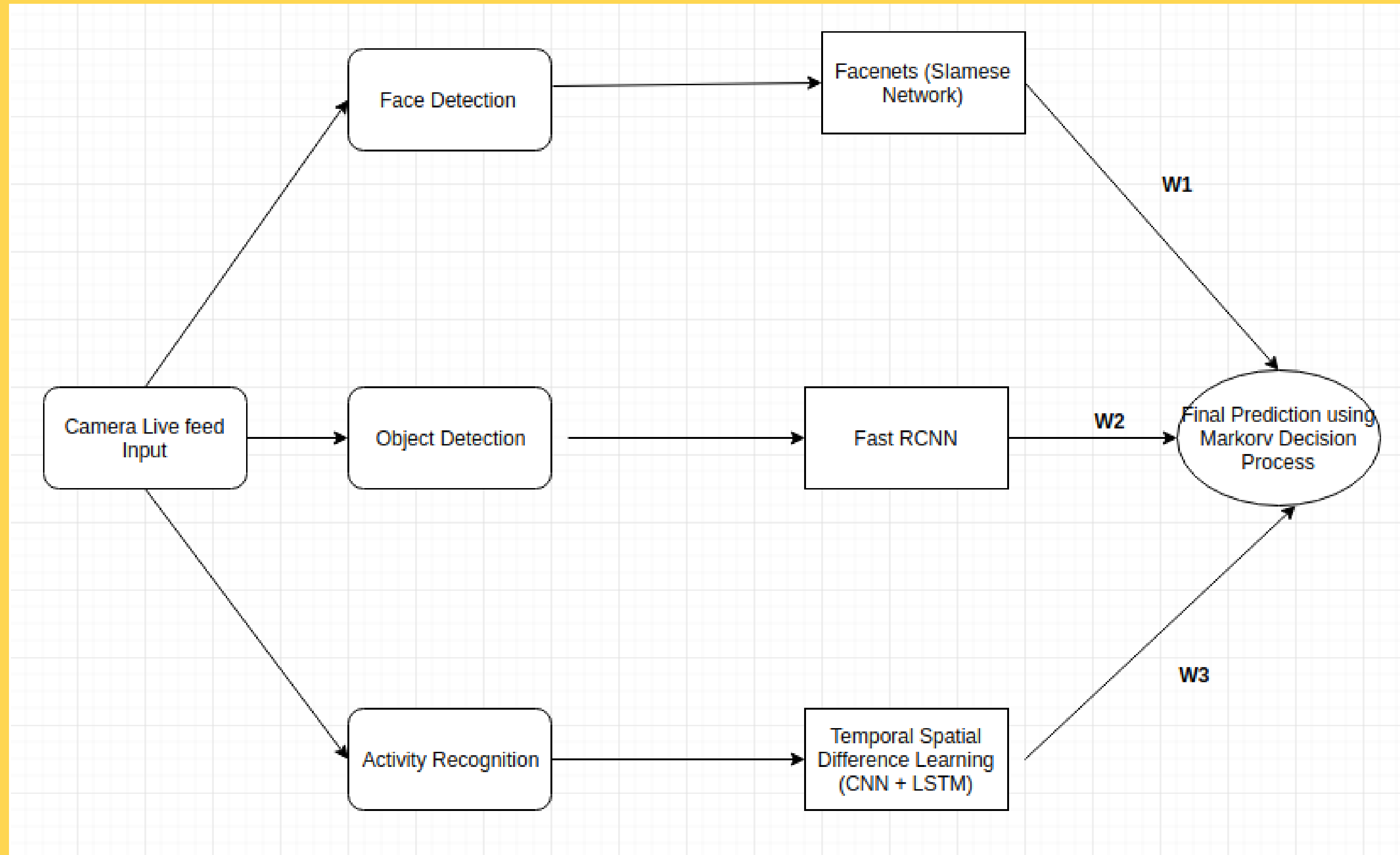
**Face
recognition**

**Weapon
detection**

**Machine
tampering
identification**

**What our ATM
Surveillance will facilitate**

ARCHITECTURE



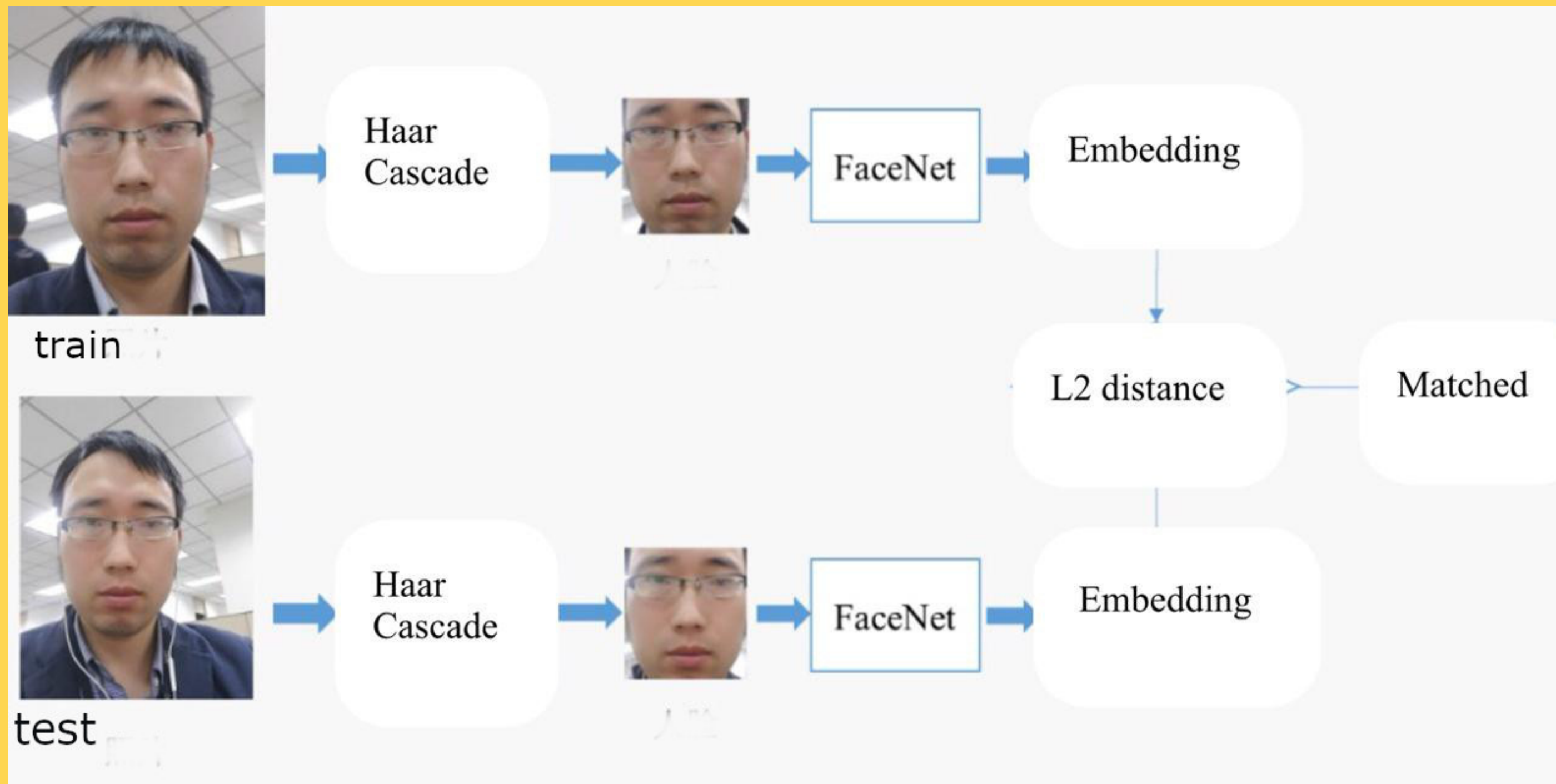


What We Learned

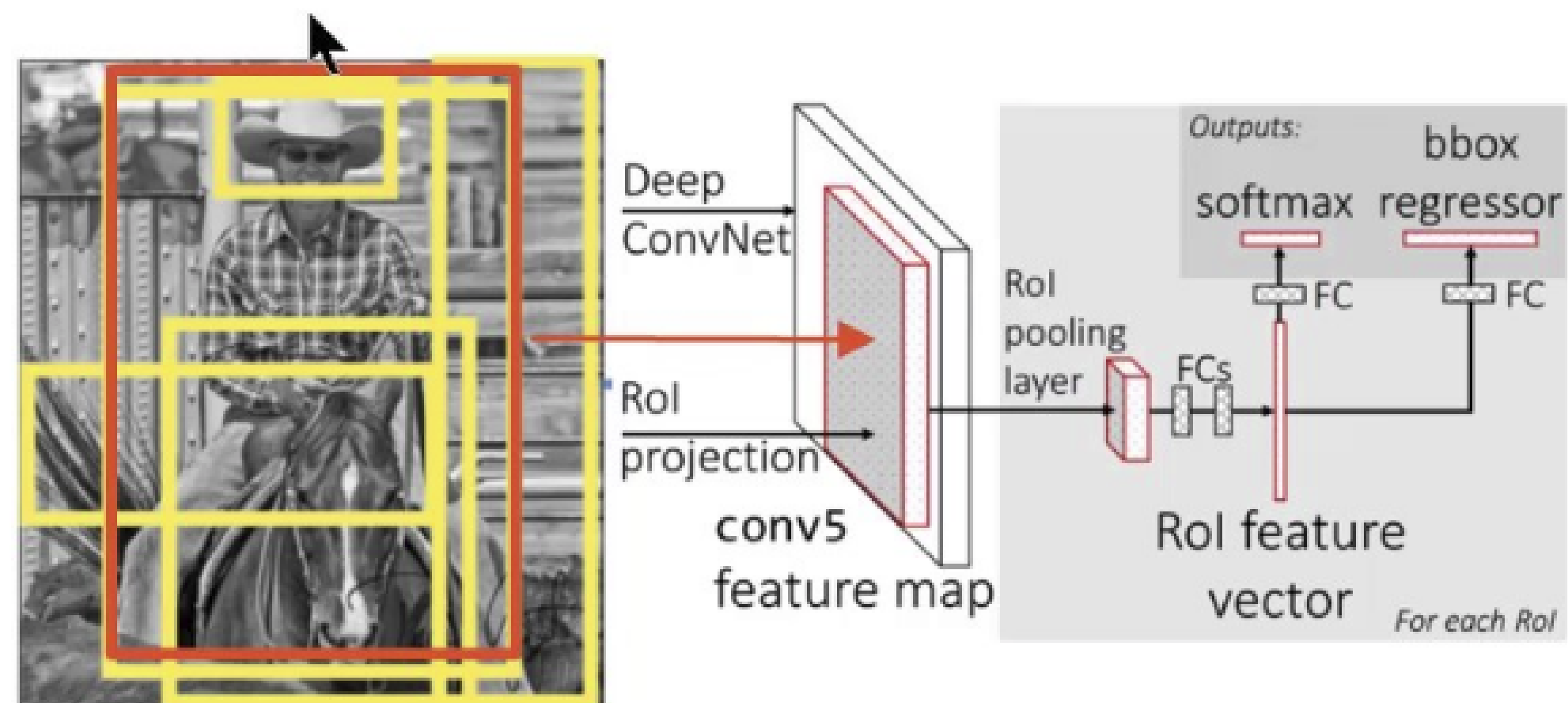
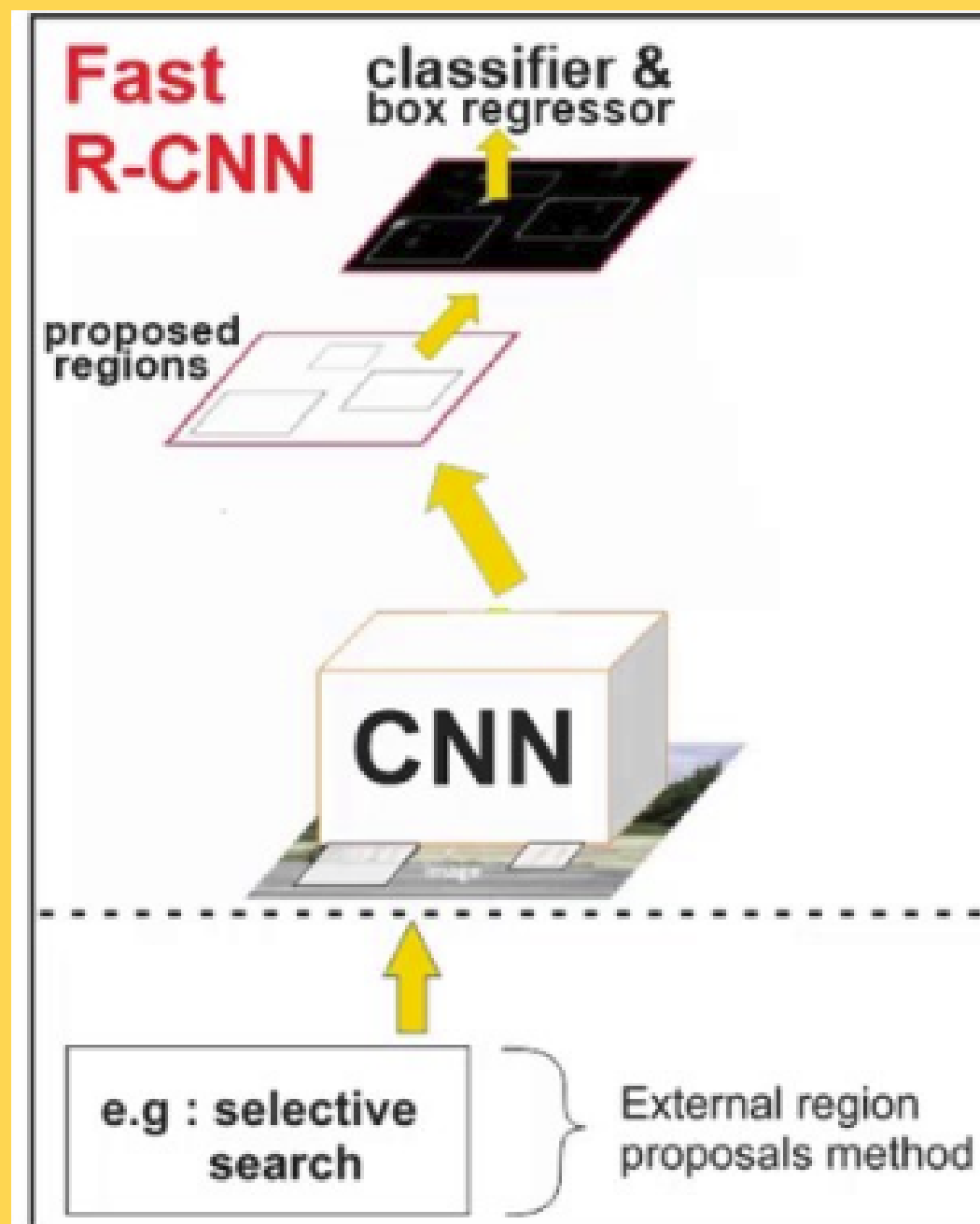
DEMO



FACE RECOGNITION



WEAPON DETECTION



ACTIVITY TRACKING

Activity Recognition
Sequences in the Input

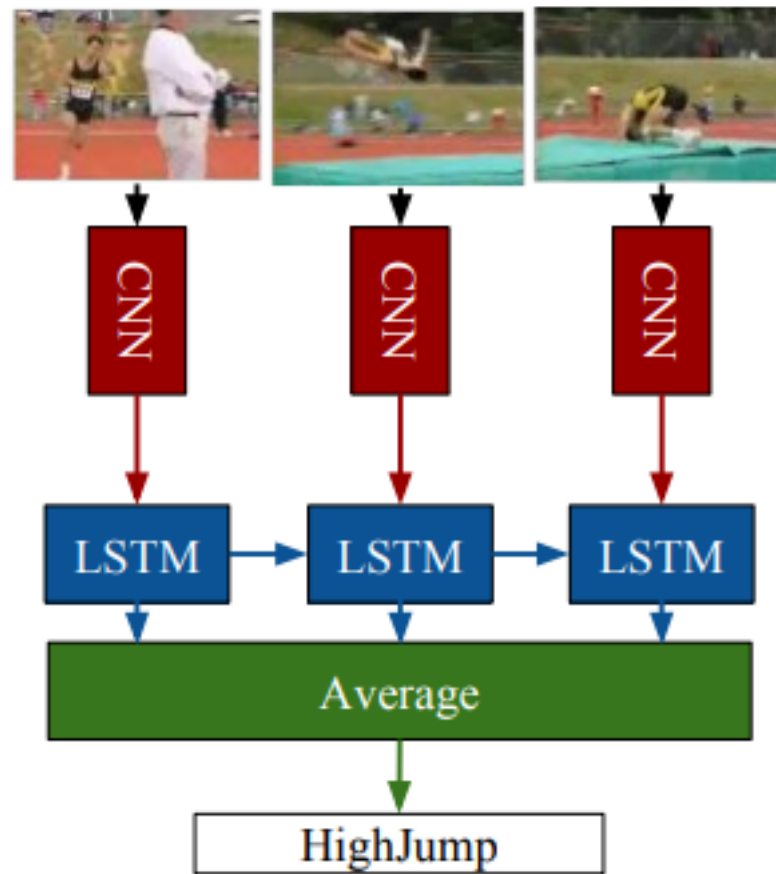
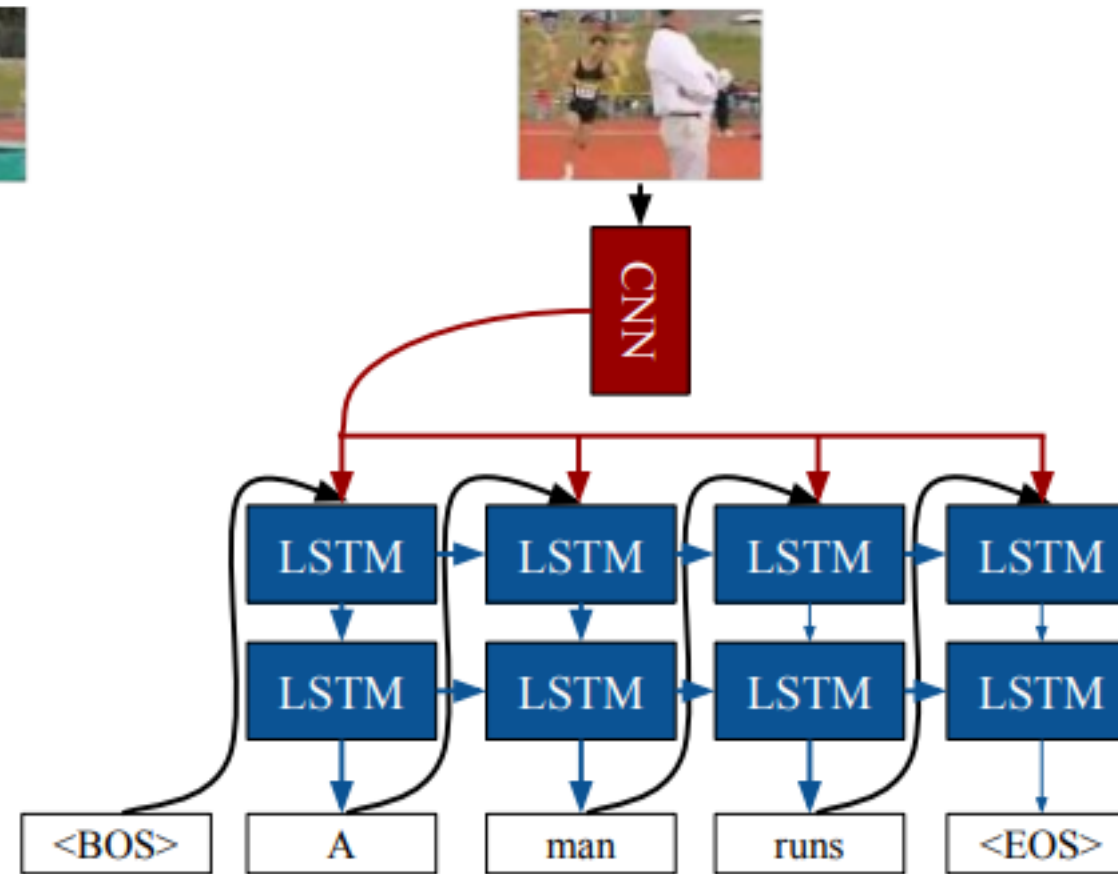
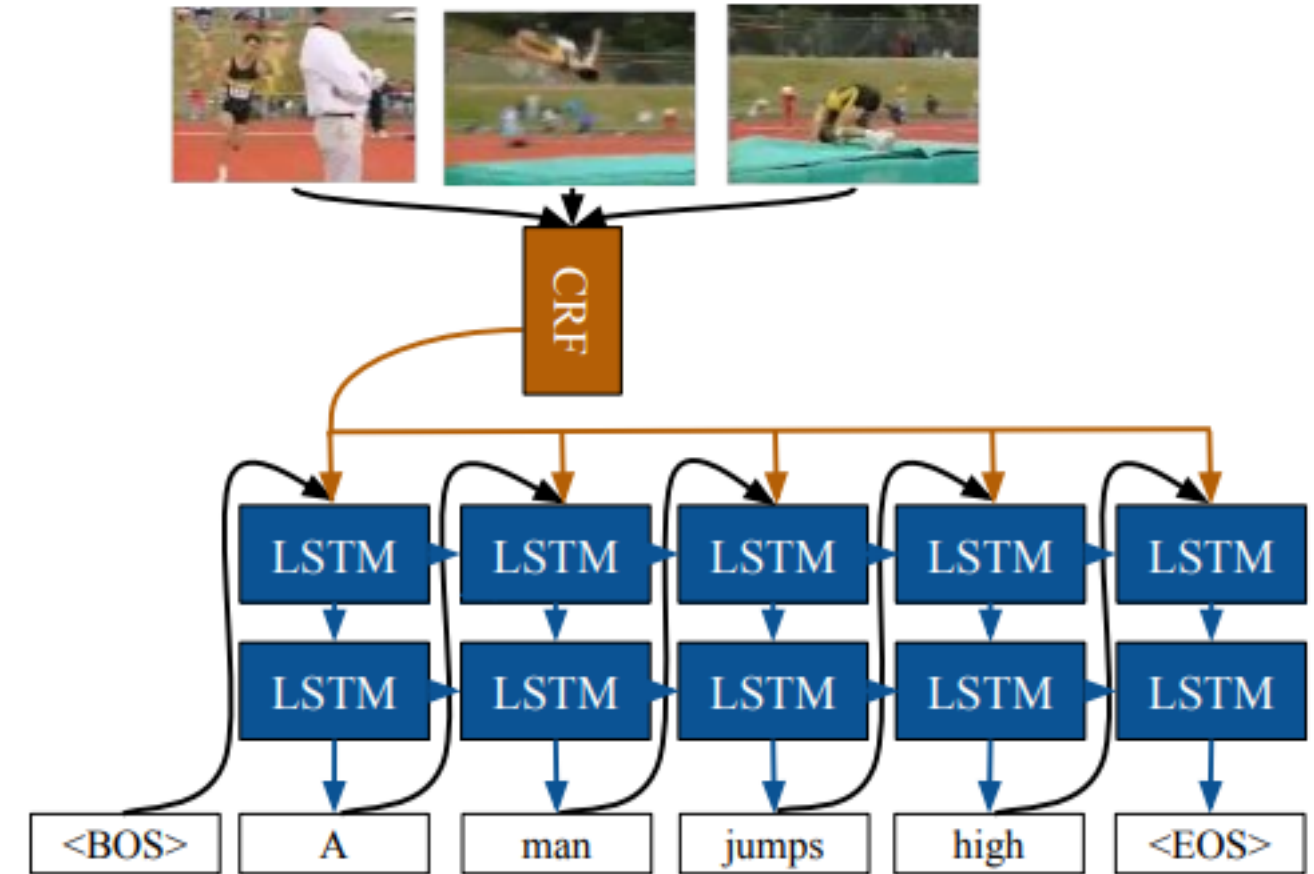


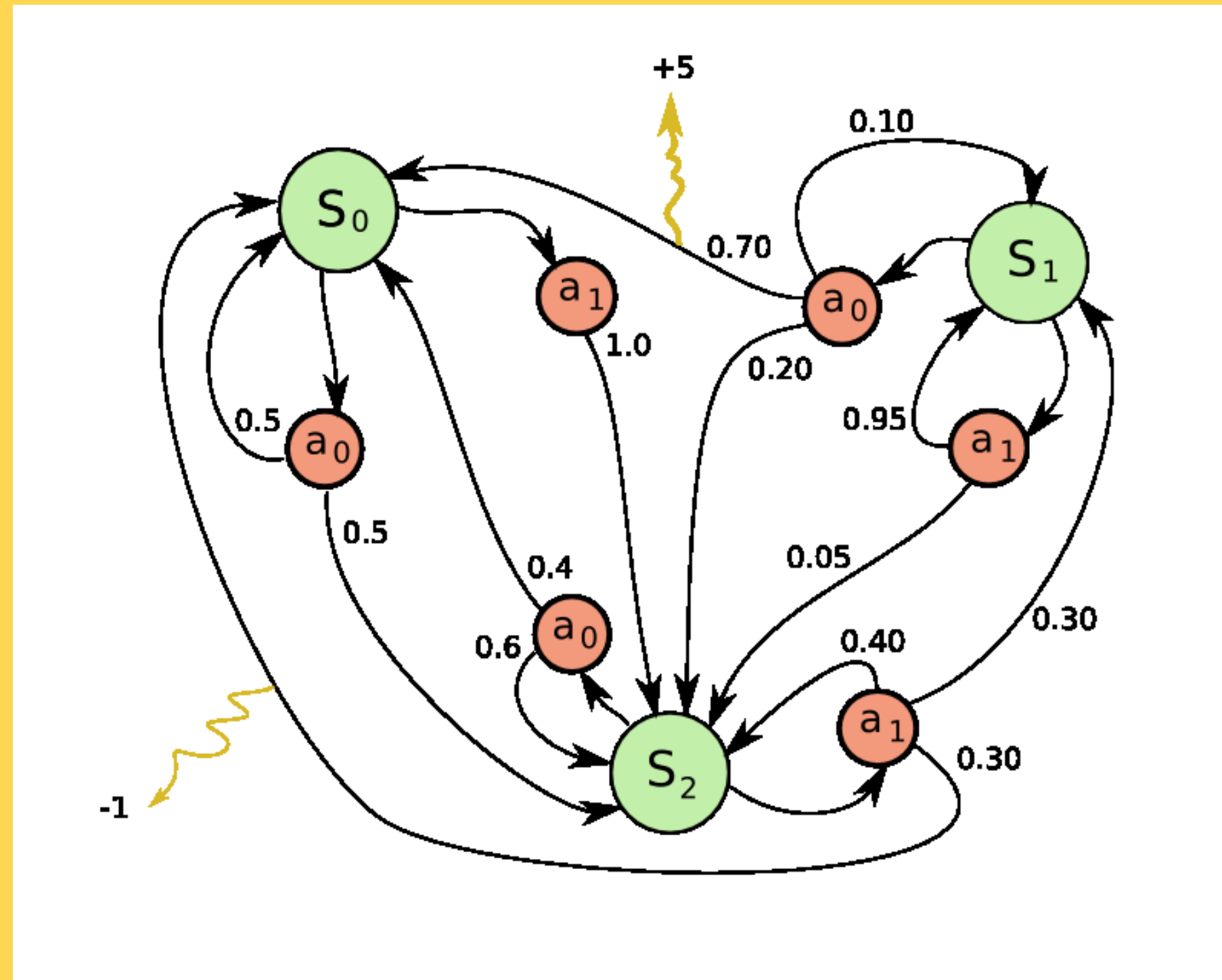
Image Captioning
Sequences in the Output



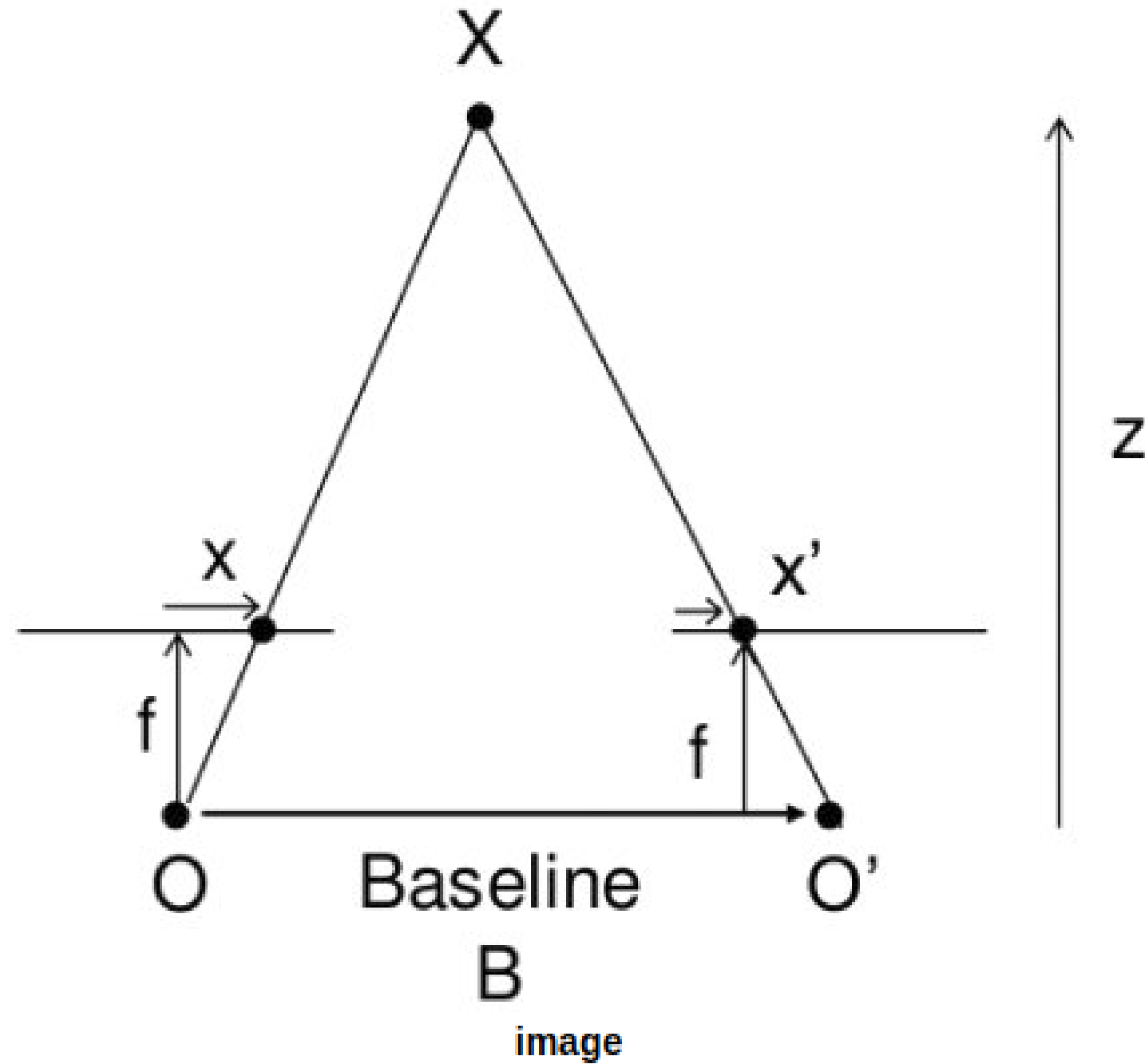
Video Description
Sequences in the Input and Output



MARKOV DECISION PROCESS



Using Stereo Image for Depth Detection



$$\text{disparity} = x - x' = Bf / Z$$



MEET THE TEAM

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