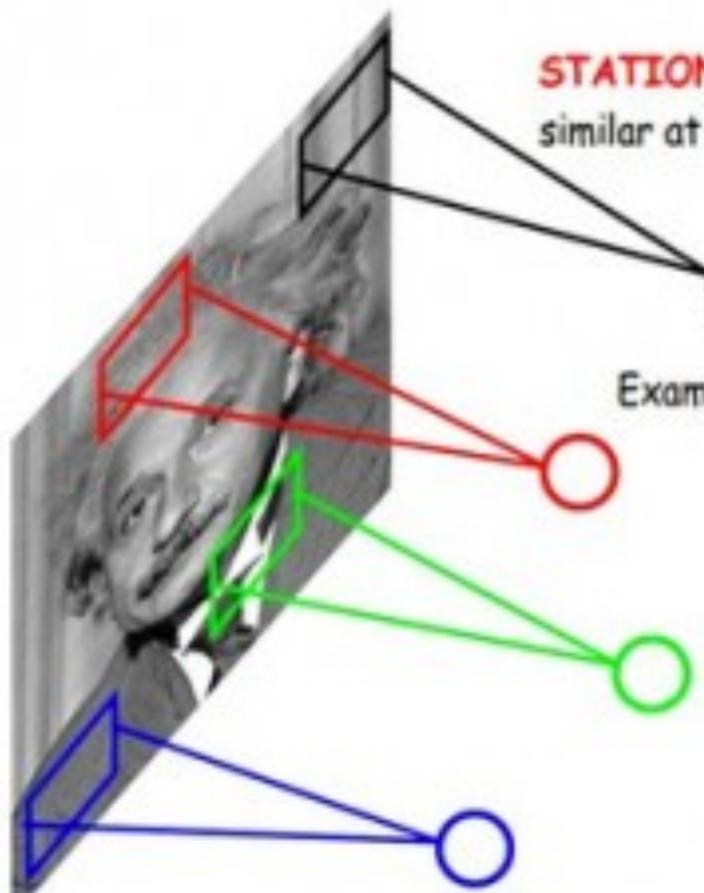# LOCALLY CONNECTED NEURAL NET

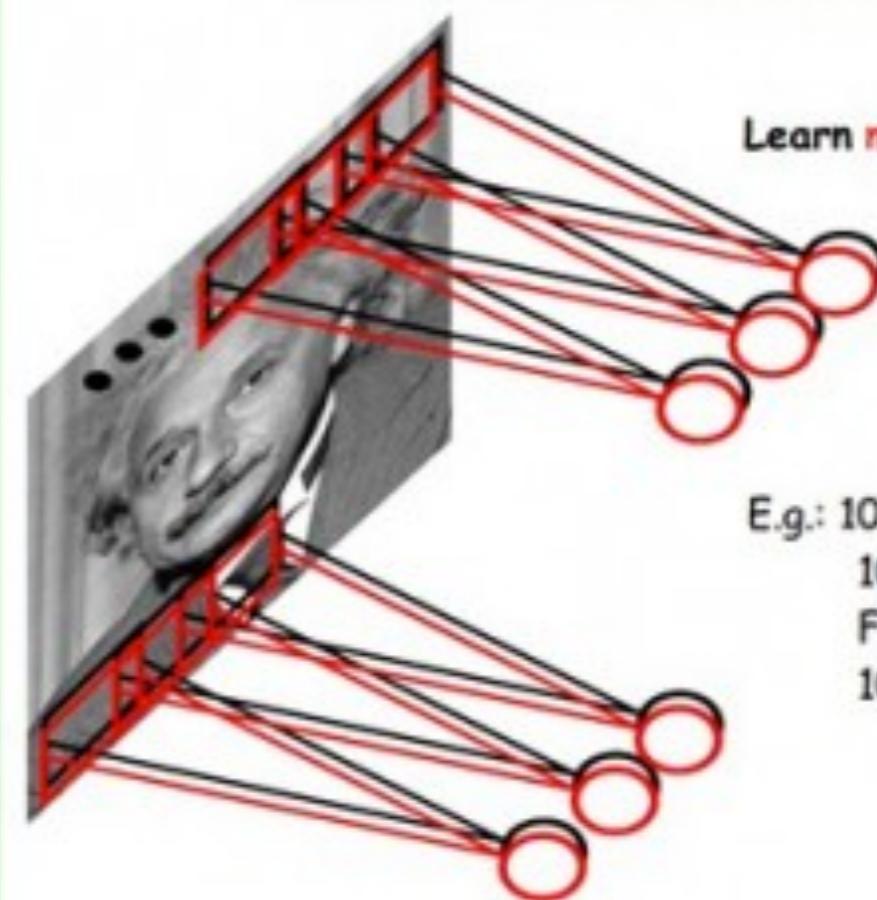**STATIONARITY?** Statistics is similar at different locations

Example: 1000x1000 image
1M hidden units
Filter size: 10x10
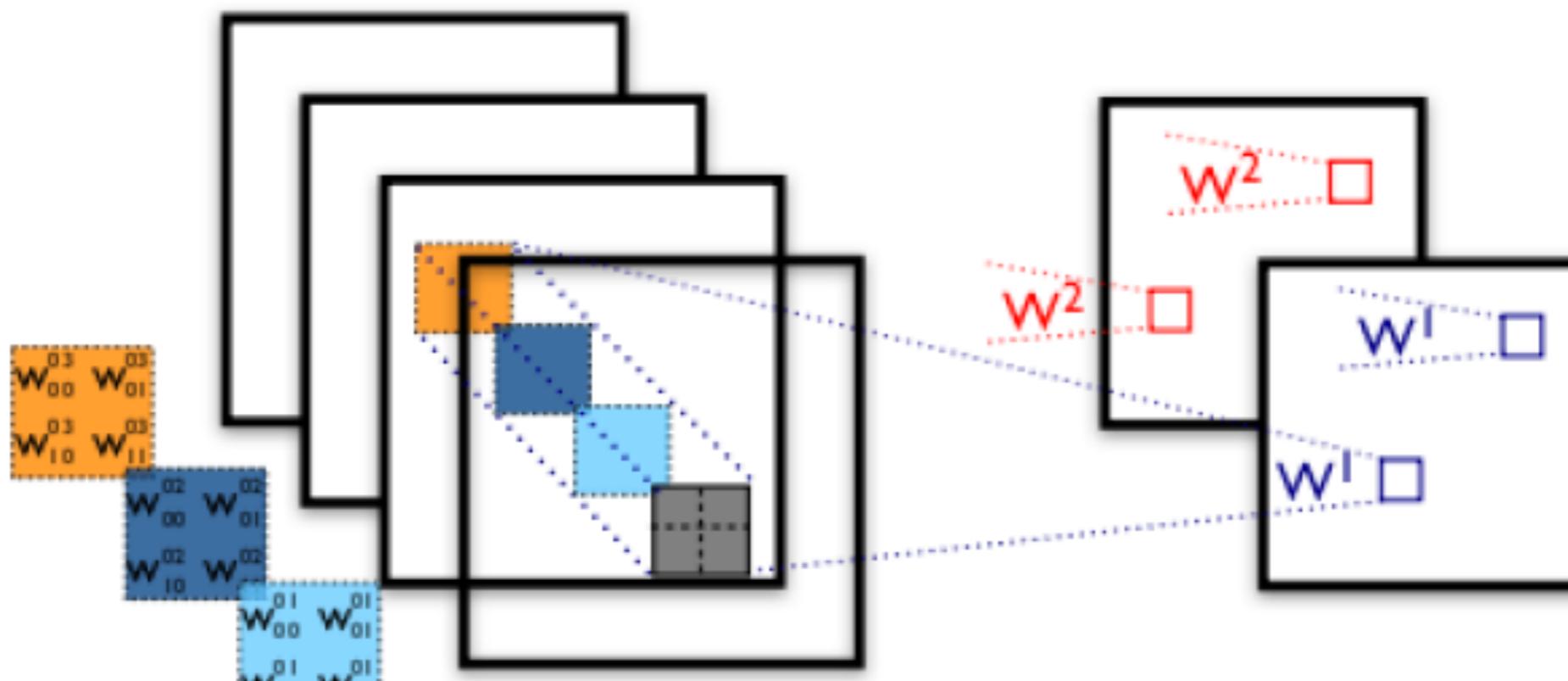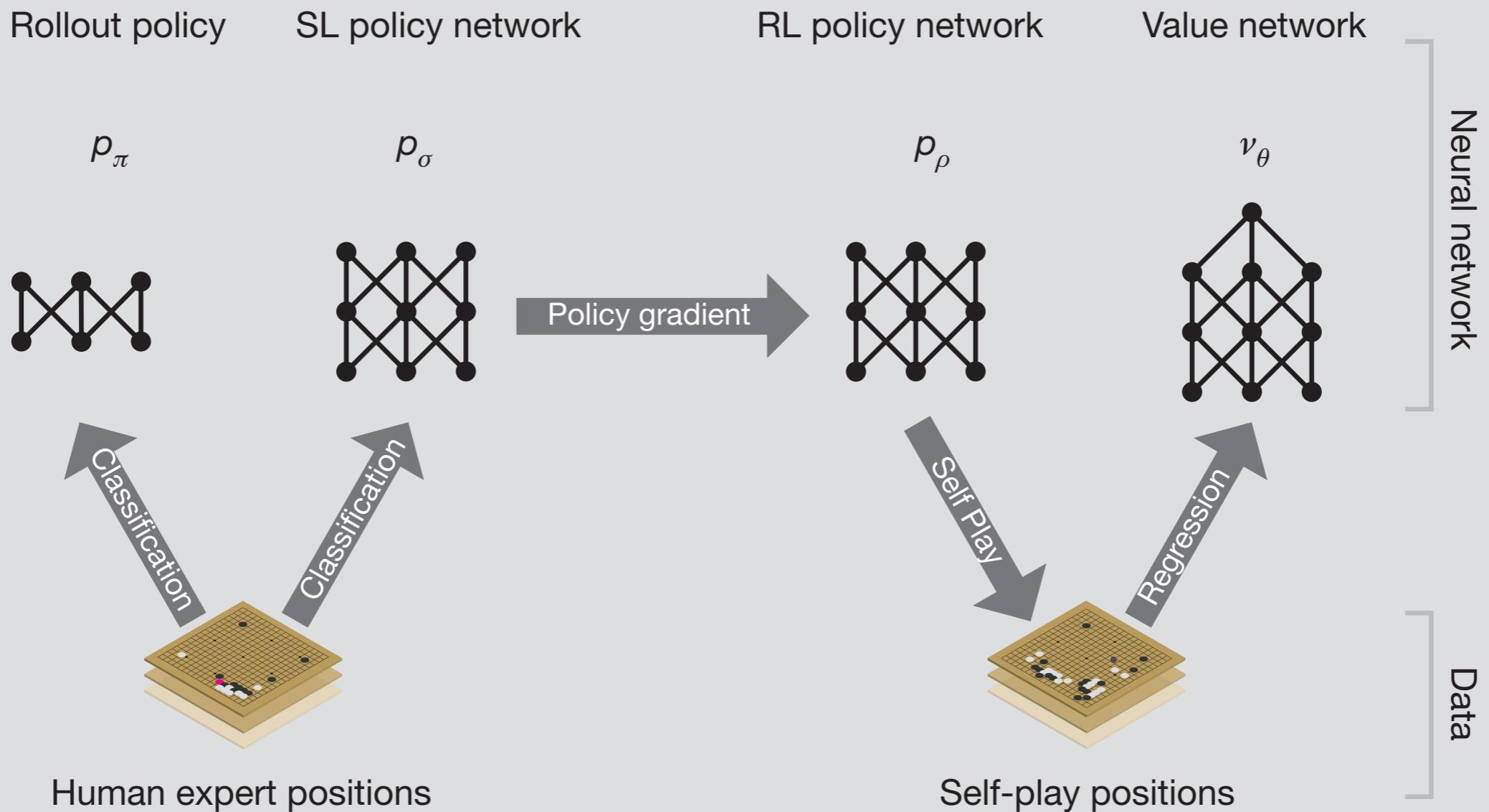100M parameters

Ranza

CONVOLUTIONAL NET

Learn **multiple filters.**

E.g.: 1000x1000 image
100 Filters
Filter size: 10x10
10K parameters

Ran

layer m-1   hidden layer m

Rollout policy · · · · · · SL policy network · · · · · · RL policy network · · · · · · Value network

$$p_\pi \qquad p_\sigma \qquad p_\rho \qquad v_\theta$$

Neural network

Policy gradient

Classification · · · · · · Classification · · · · · · Self Play · · · · · · Regression

Human expert positions · · · · · · Self-play positions

Data

- SL Policy network

- 13 layer CNN

- Accuracy 57% VS 44.4%

- Fast Rollout Policy

- local feature & linear model

- Accuracy 24.2% & 2us VS 3ms

- RL Policy network

- Self-play 30 million times

- Value network

- self play data set

- add