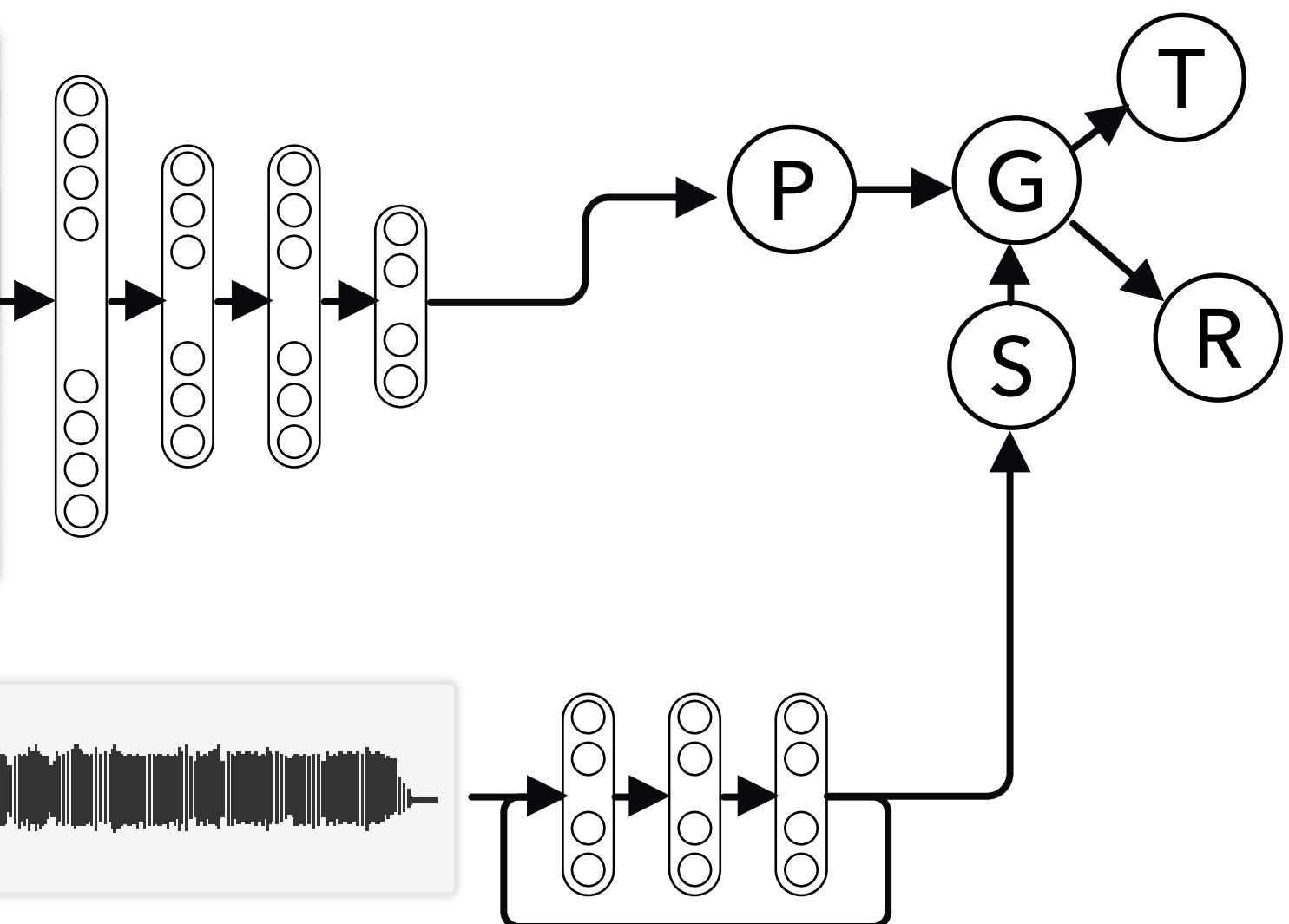
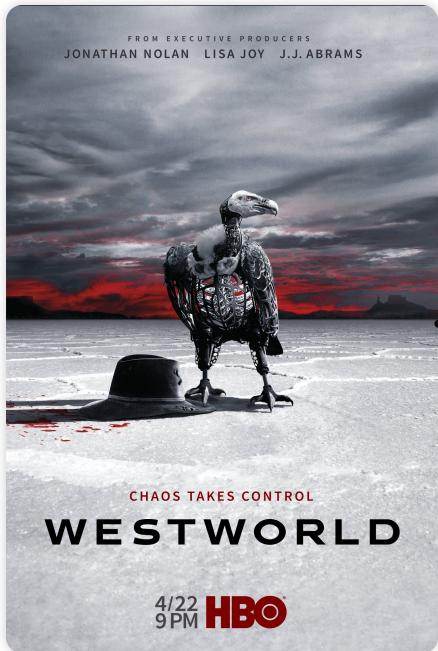


# Deep Learning Models

## Meaning from high dim data

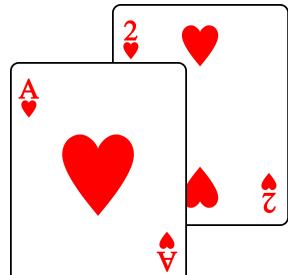


Poker is an ideal vehicle for testing automated reasoning under **uncertainty** with potential advantage from access to high dimensional data to **model the oponent**.

## Deep Learning



I raise  
\$20

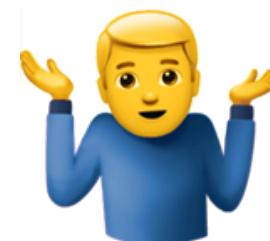
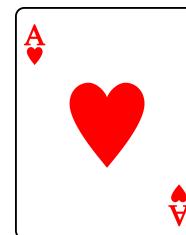


Estimating level of confidence

Understanding oponent's actions

Knowing what cards I am holding

## Causal Inference



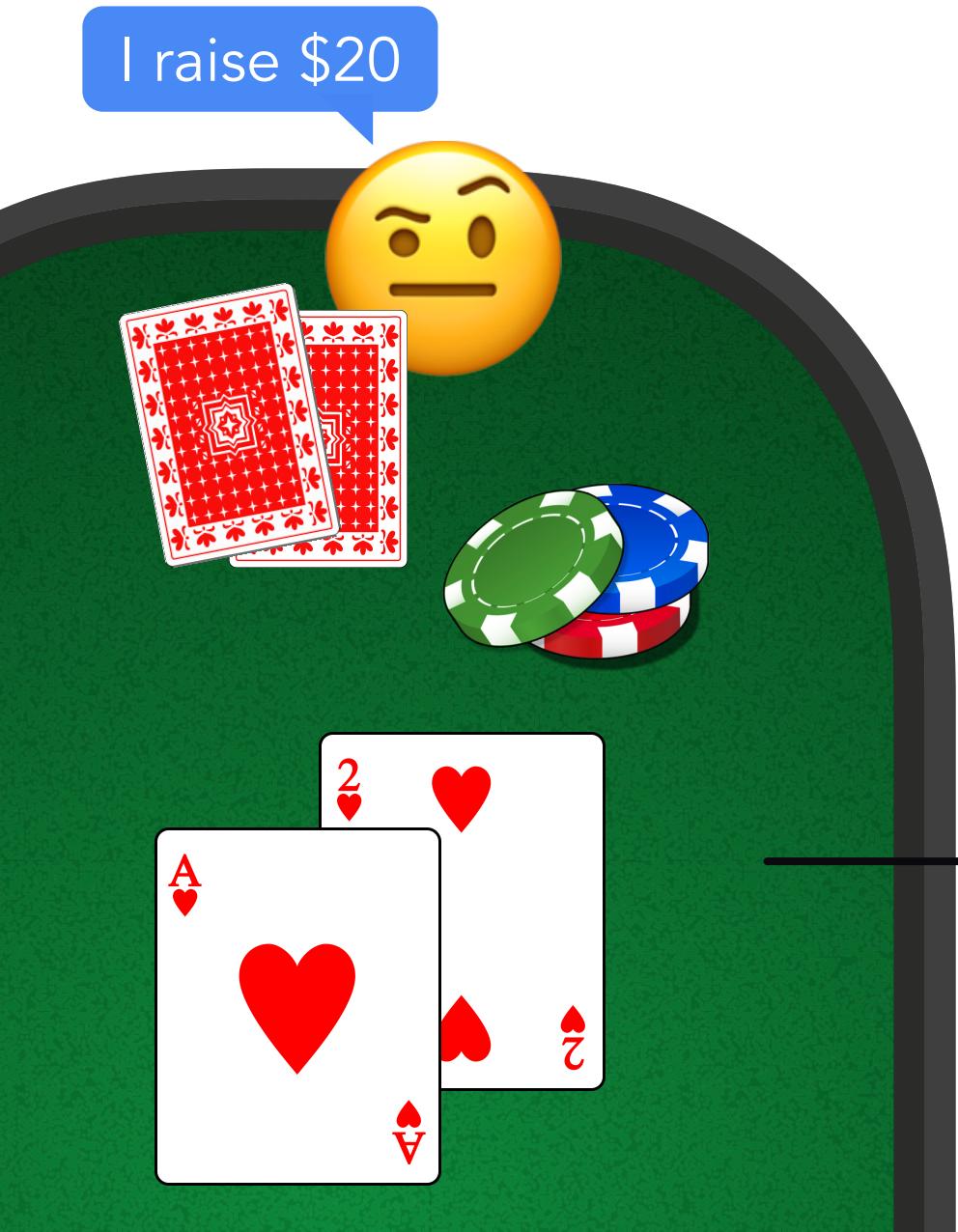
What do these cards even mean?

What my oponent's actions say about their hand?

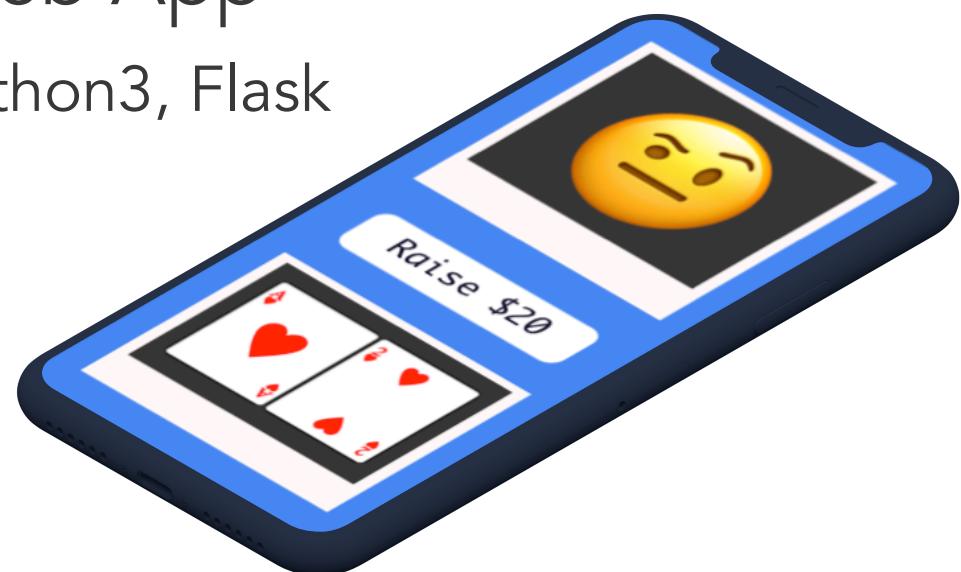
What action will maximize my profit?

# Poker Game

Uncertain, Complex

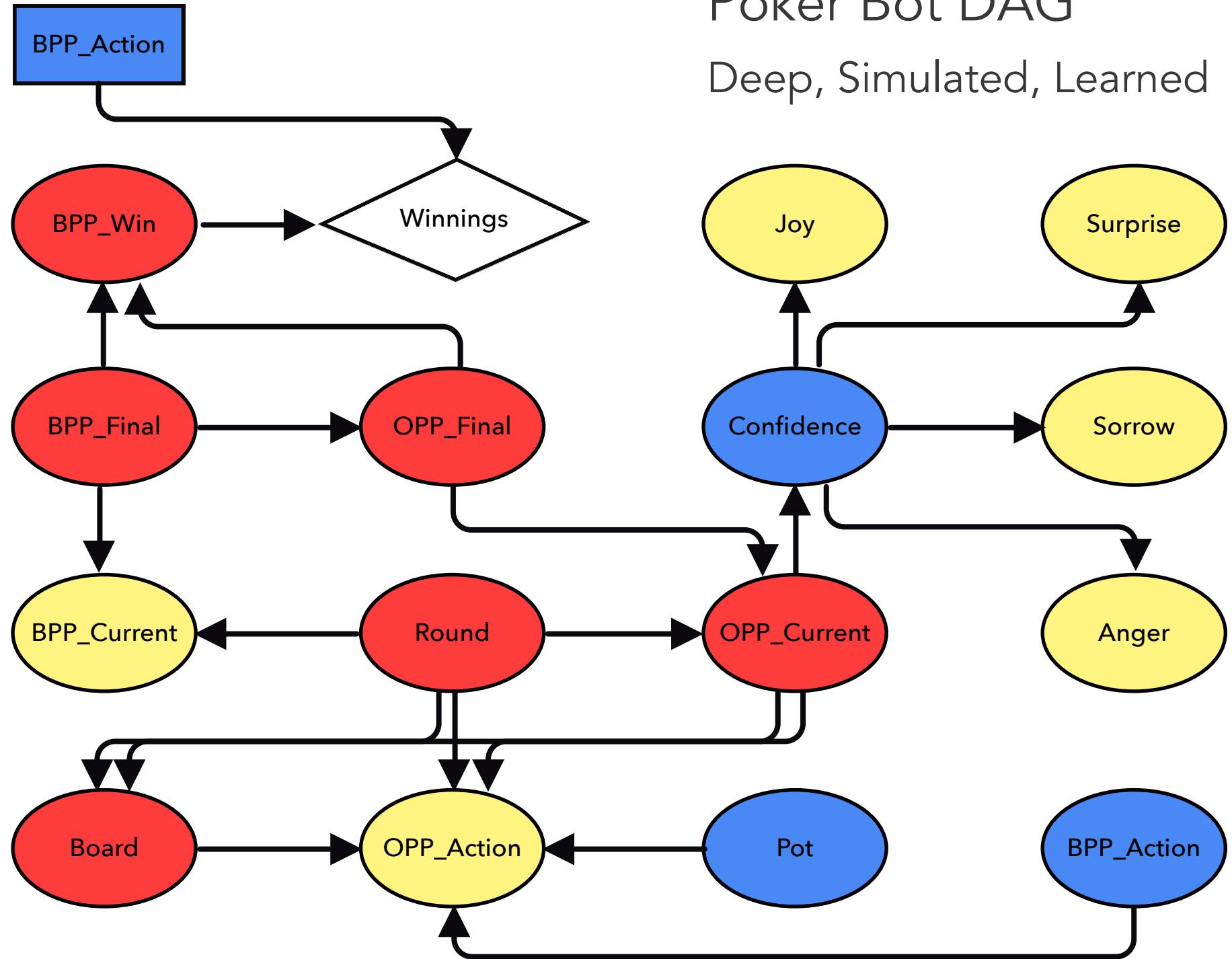


Google Cloud Platform  
Speech, Vision, ML, Compute



# Poker Bot DAG

## Deep, Simulated, Learned



## Done:

- Define network structure
- Build poker engine for python
- Train simulated and deep nodes
- Recognize OPP reactions
- Understand OPP actions
- Build web Front/Back end
- Connect to GCP

## To-Do:

- Train learned nodes
- Retrain CNN for understanding cards
- Train simulated and deep neurons
- Migrate poker engine to cloud

