

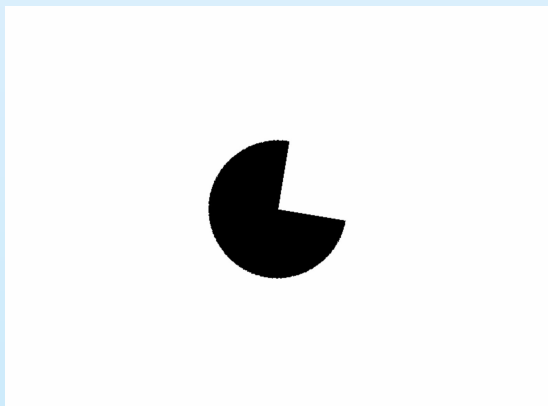
# Neural Networks for Feature Analysis

Daksh, Mayank, Katie

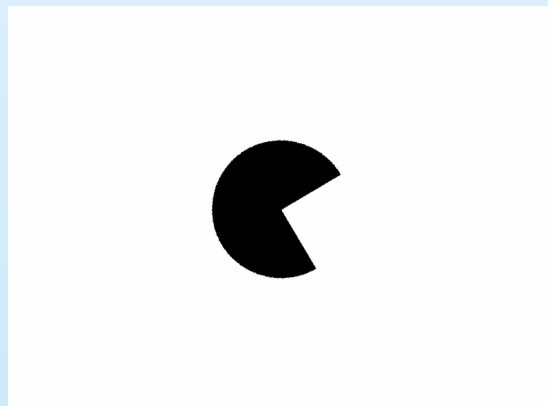


# This week

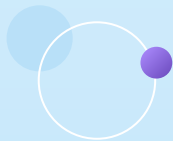
Testing the model with Patterns – **Clockwise/Anticlockwise Test**



**4 frames – 100%**

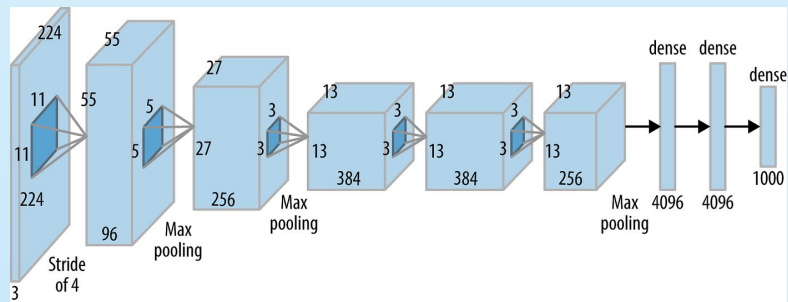
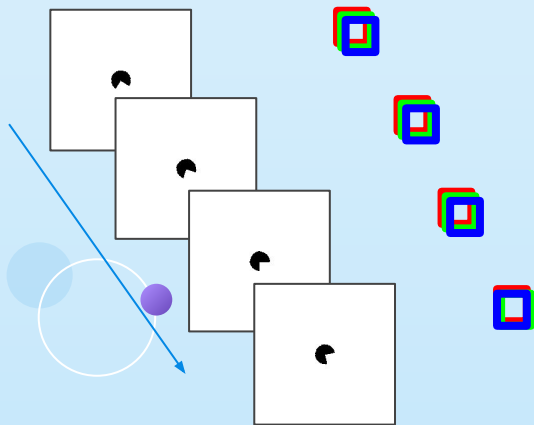


**1 frame ~ 50%**



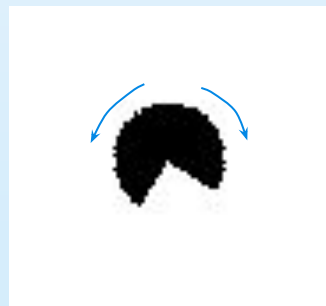
# Time Varying Features

- Just increase channels
  - Keep same kernel size
  - Works for small movements

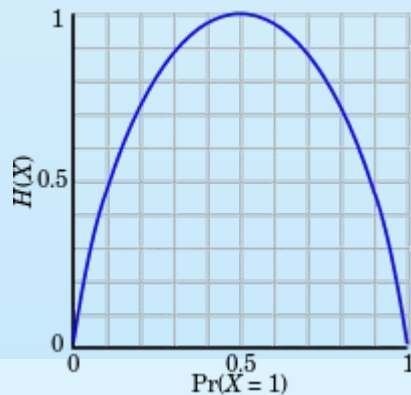


# Test Case

- Either turn left/right randomly
- Can we detect left turns?
  - Probability of turning left/right
  - 50% vs 100%? Can you tell difference?
  - In between?
- Use entropy for the general case

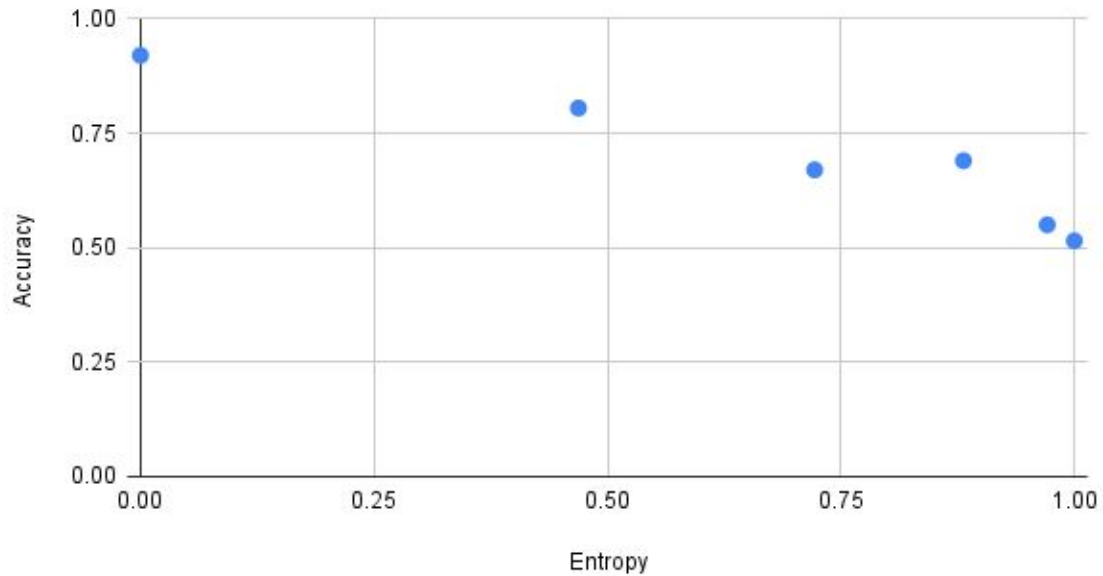


$$H(X) = - \sum_{i=1}^n p_i \log_2 p_i$$



# Test Case

Accuracy vs. Entropy



# Next week

- Testing Bee Simulator on multiple Frames
- Getting the relation between entropy and accuracy

