Dogs vs Cats Classification

Sai Prasad (173050010)
Adarsh Rathore (173050050)

Problem Definition

Classify Images whether it contains Dog or Cat using Convolution Neural Networks

Used The Asirra Dataset (From Kaggle)

Describing the Arissa data

- Labelled Data (25000)
- Unlabelled Data (12500)

(We Used only Labelled Data)

- Train Data: (20000)
  - Dogs: 10003
  - Cats: 9997
- Testing Data: (5000)
  - Dogs: 2463
  - Cats: 2537

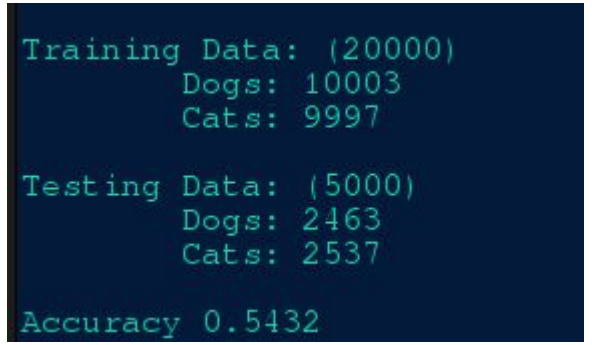
Various Models Used

- ❑ Logistic Regression for Binary Classification
- ❑ Convolution Neural Networks (CNN)

Logistic Regression

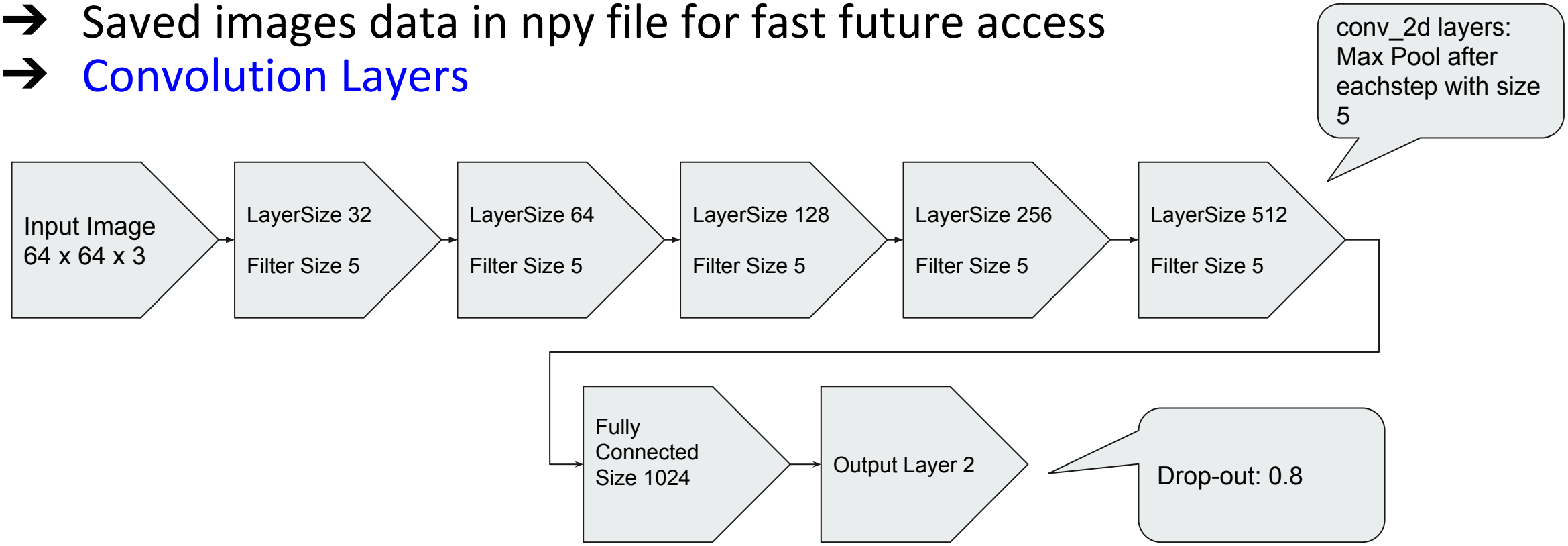
- ➔ Labelled Dog as 1 and Cat as 0
- ➔ Reshaped all images to 64x64 (Using PIL)
- ➔ Used GaussianBlur // For Noise Reduction

Accuracy on Machine Data = 0.5432
Loss on Kaggle = 0.70145



CNN Preprocessing Data

- ➔ Labelled Dog as [0,1] and Cat as [1,0] - One Hot Encoding
- ➔ Reshaped all images to 64x64 (Using cv2)
- ➔ Saved images data in npy file for fast future access
- ➔ Convolution Layers



CNN Accuracy

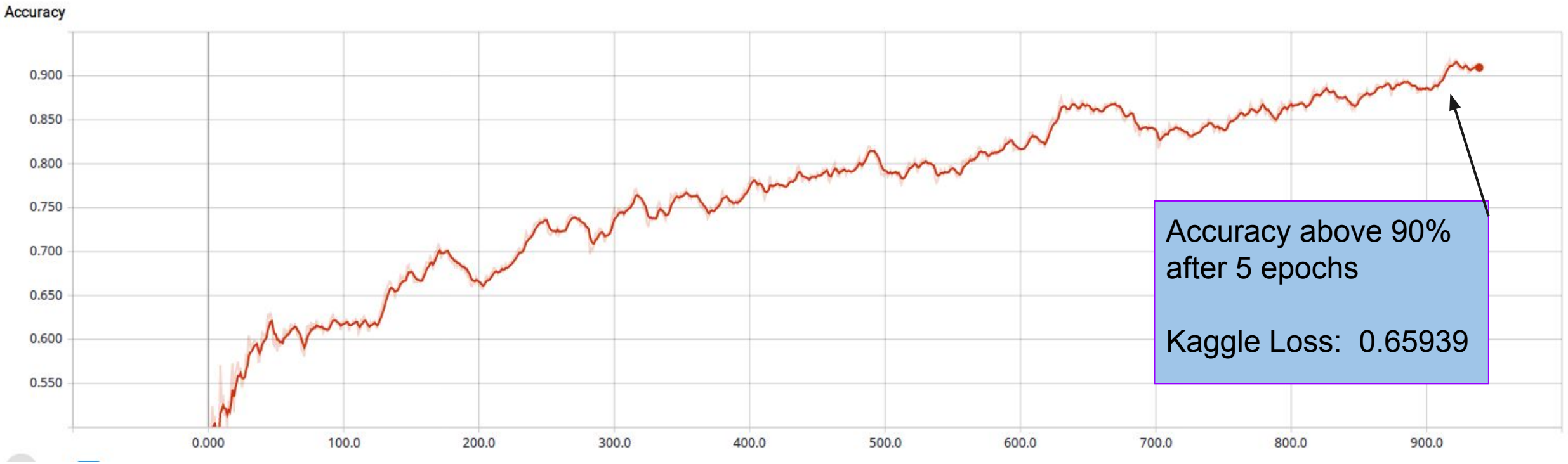


Image from TensorBoard

Thank You