

Dog Breed Classification

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CS 5891: Final Project Presentation

- # Background

- Goal: Classify images of dogs into one of 133 breeds
- Motivation: I foster / volunteer with a lot of dogs



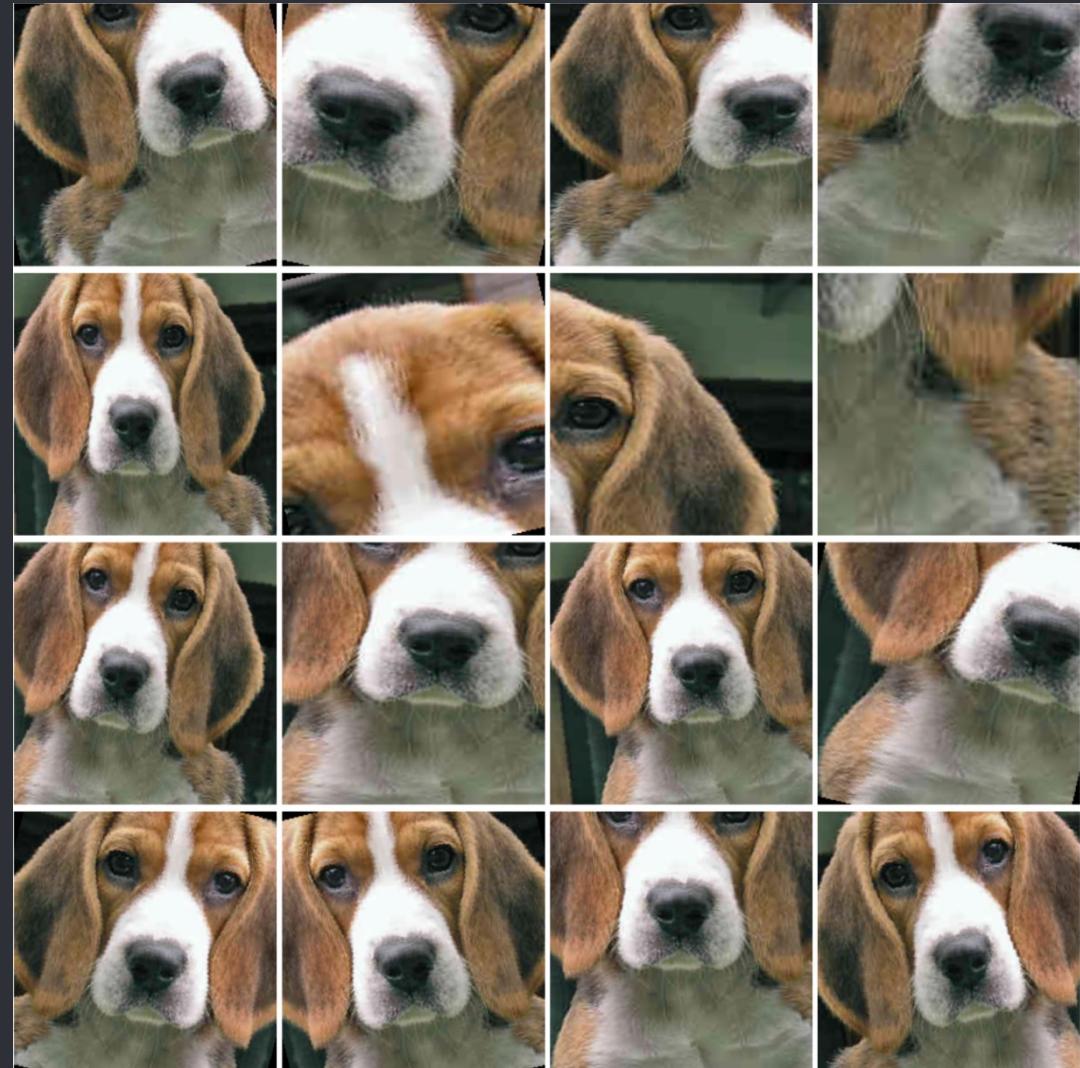
Archie
Breed: Rottweiler Mix



Suzie Q
Breed: Pitbull Mix

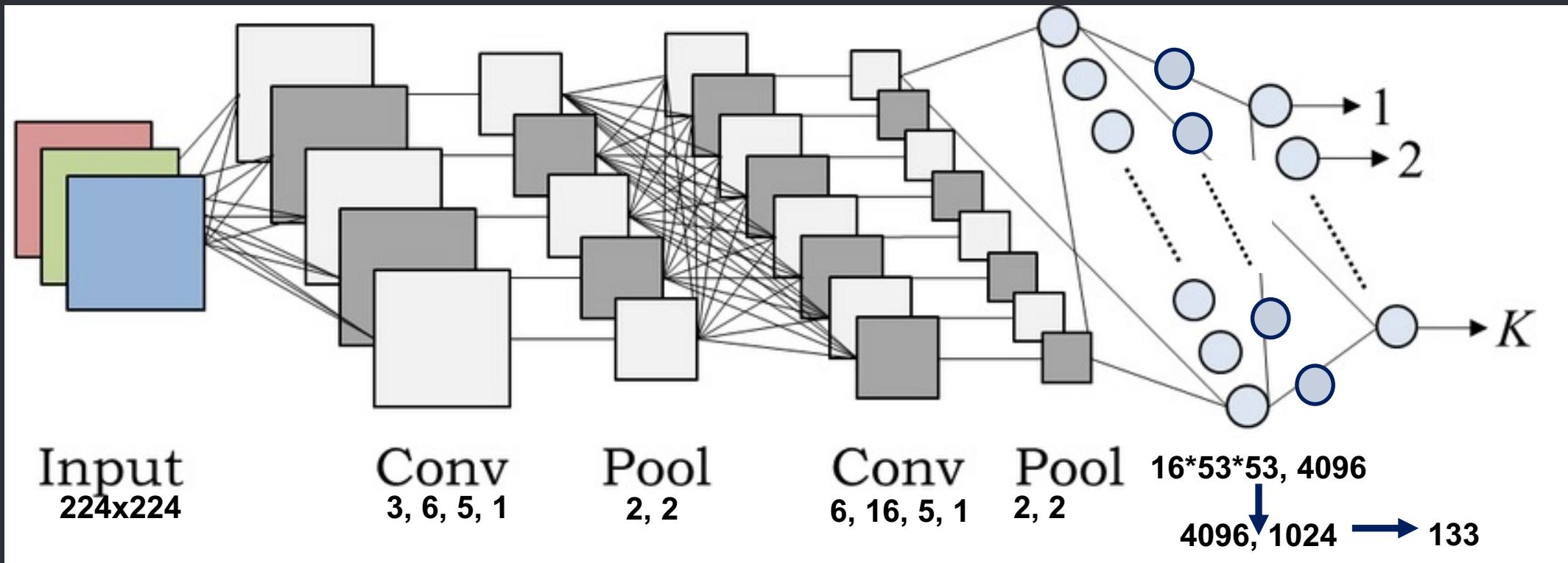
- # Data Augmentation

- 8,351 total dog images
 - 6,680 training
 - 835 validation
 - 836 test
- Training data was:
 - Randomly cropped
 - Randomly rotated
 - Color jitter
 - Random Horizontal Flip

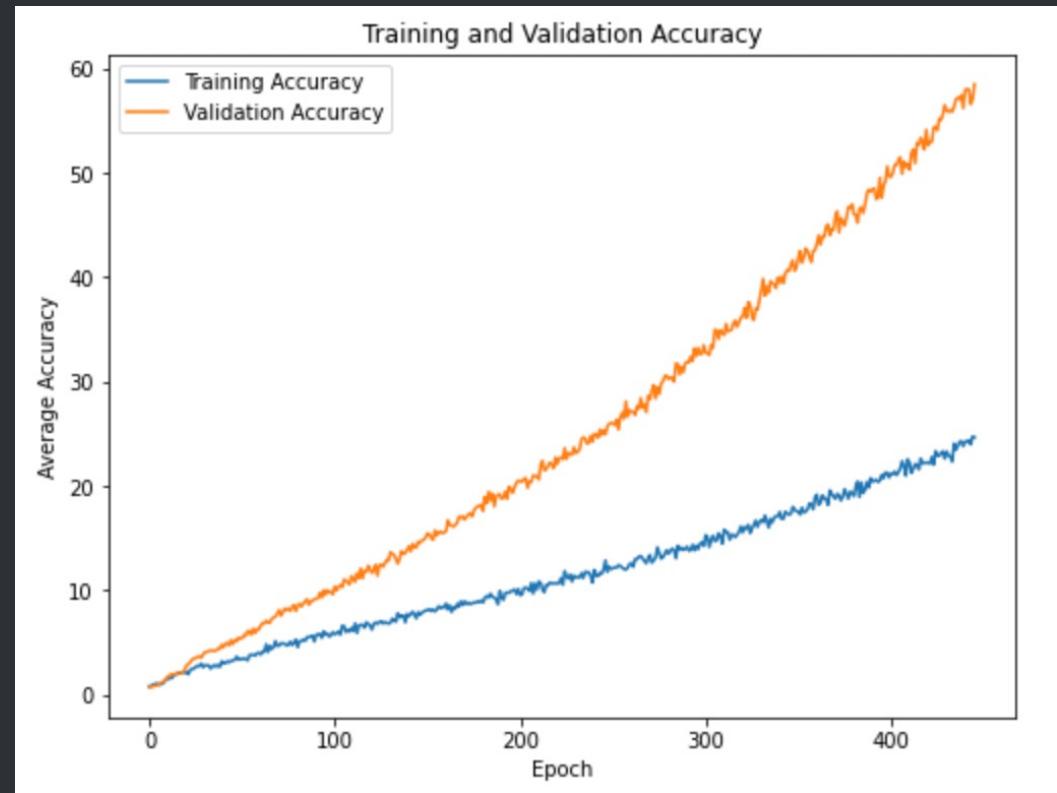
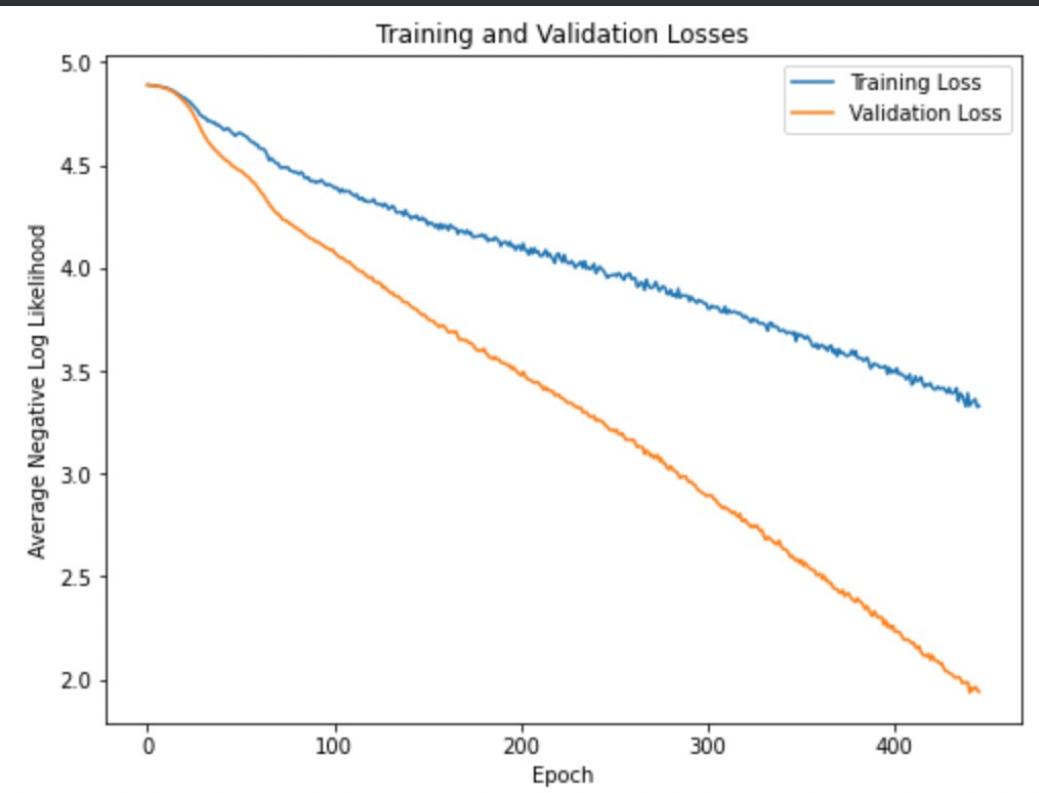


Augmented Beagle Data

- Baseline Model

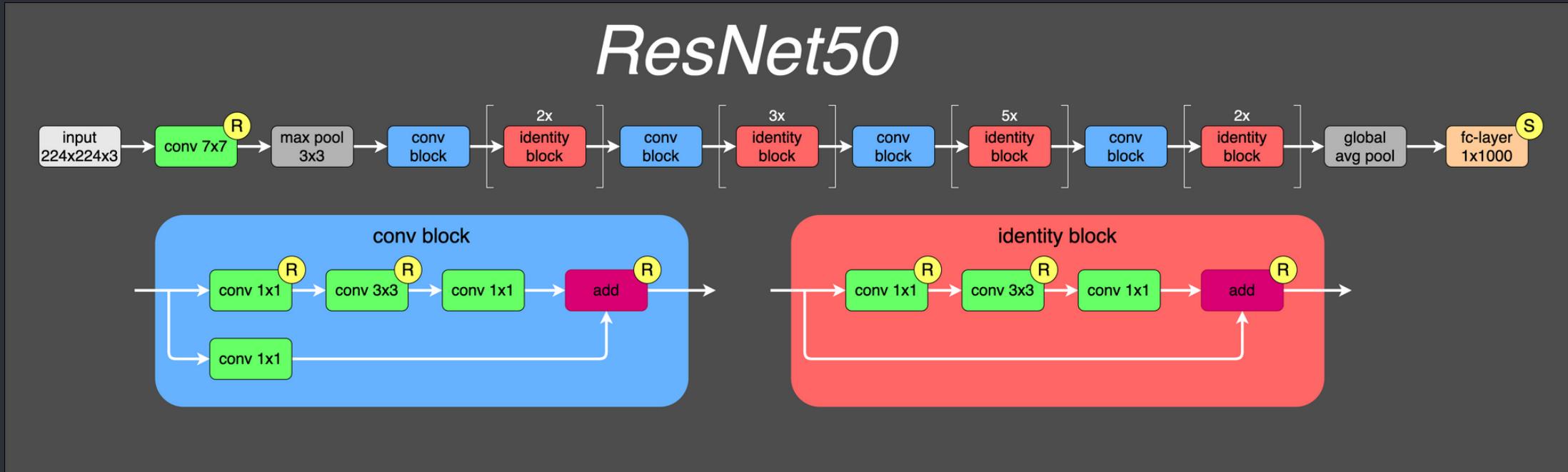


• Baseline Model Results

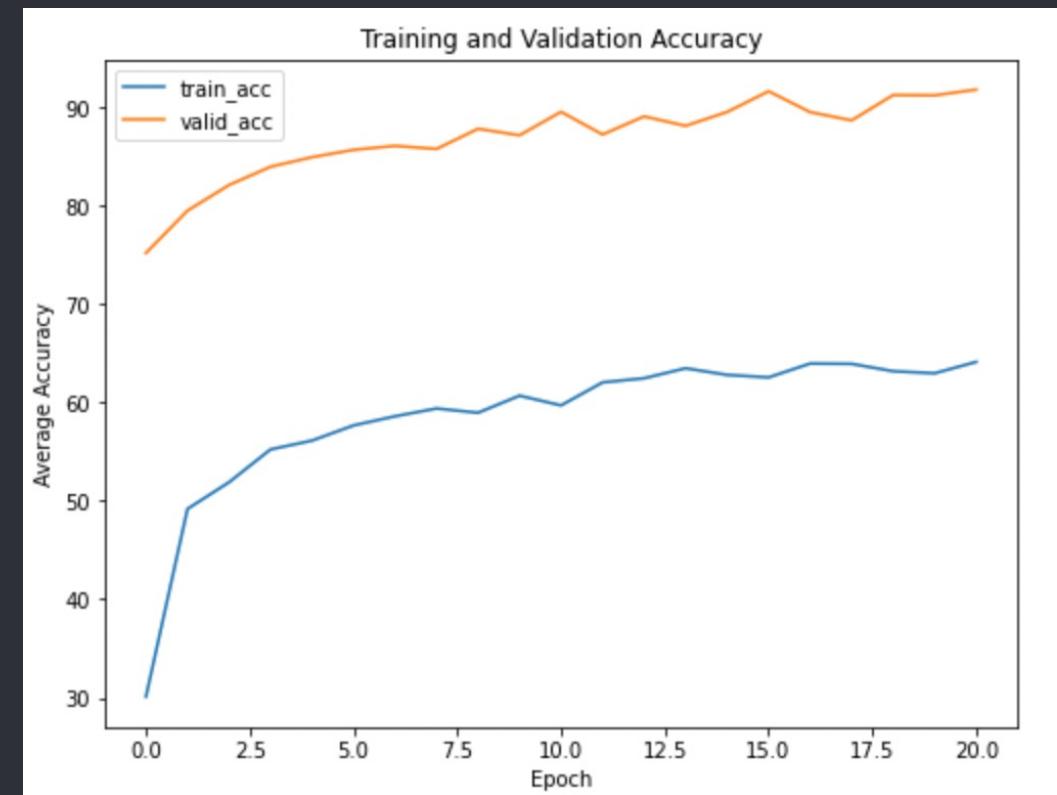


Test Accuracy: 57%

- Transfer Learning Model



• Transfer Learning Model Results



Test Accuracy: 91%

• Predictions



BeeGee
Breed: Lab x Poodle
Predicted Breed: Bichon Frise



Major
Breed: Husky x Rottweiler x
Lab x Chow Chow
Predicted Breed: Mastiff



Charlie
Breed: King Cavalier
Charles Spaniel
Predicted Breed: Welsh
Springer Spaniel



Alex
Breed: Human
Predicted Breed: German
Short-Haired Pointer

