Car Body Type

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Data description

- Data set includes year, make, model, and body type of each car

- 16,185 images

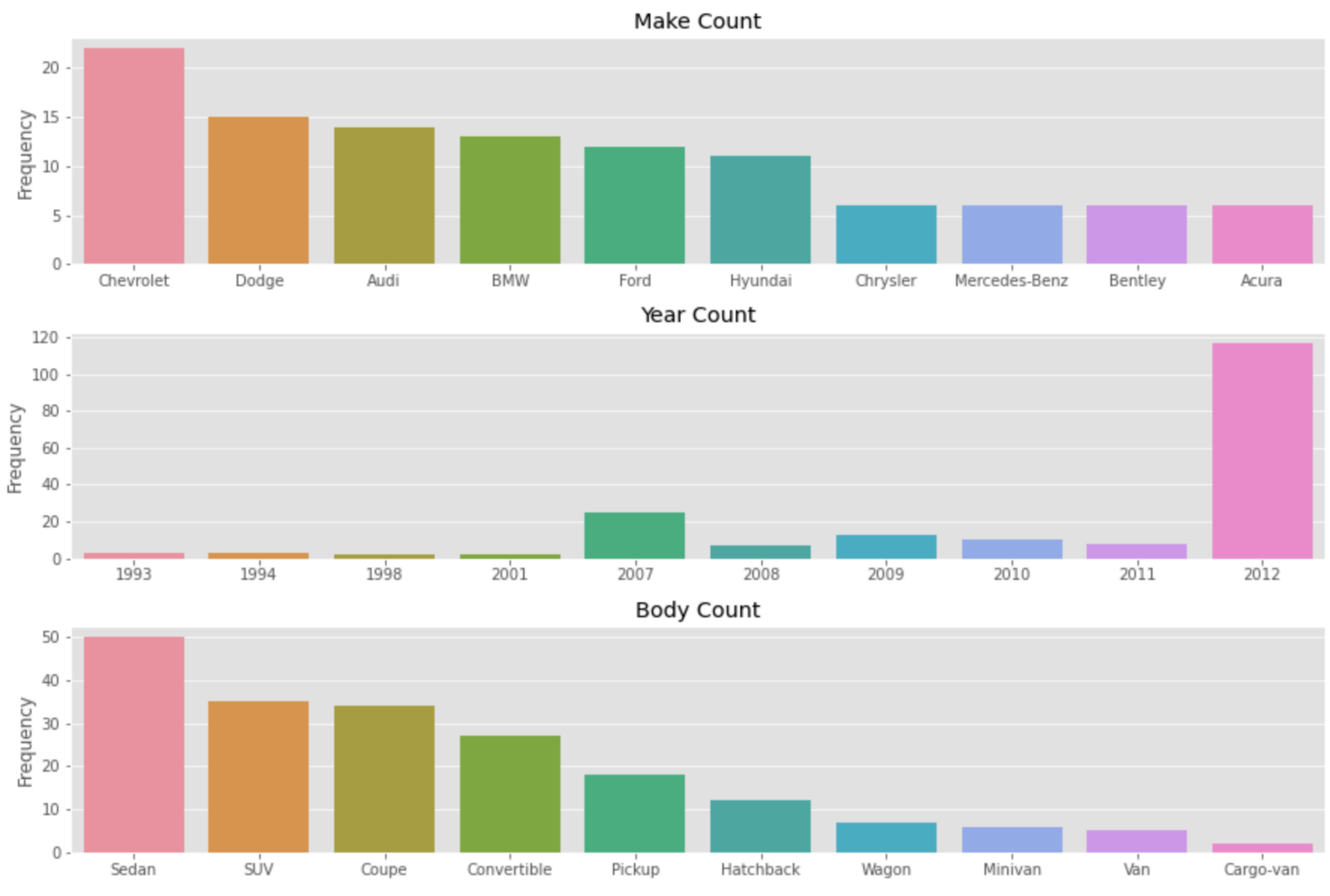 - Half are testing images and half are training images

Analysis

- Can we successfully classify cars by model?

- Can we use a model in a production setting?

- How can we use this analysis to predict car cost?
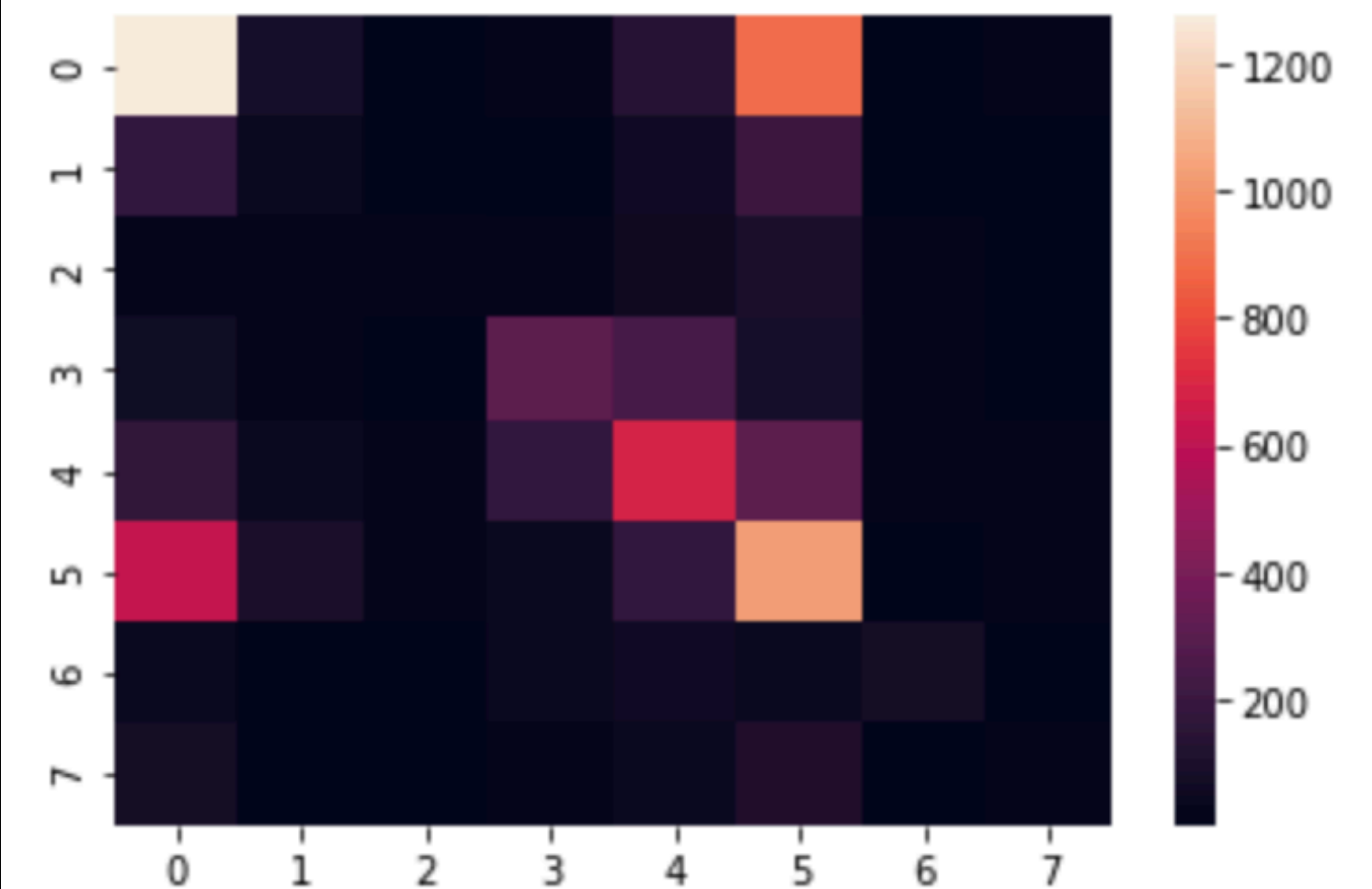
Data

Data

All Inclusive model

- 43% Accuracy.

- Only performed well when classifying 4 types of cars.

  - Sedans

  - Coupe

  - Pickup

  - SUVs
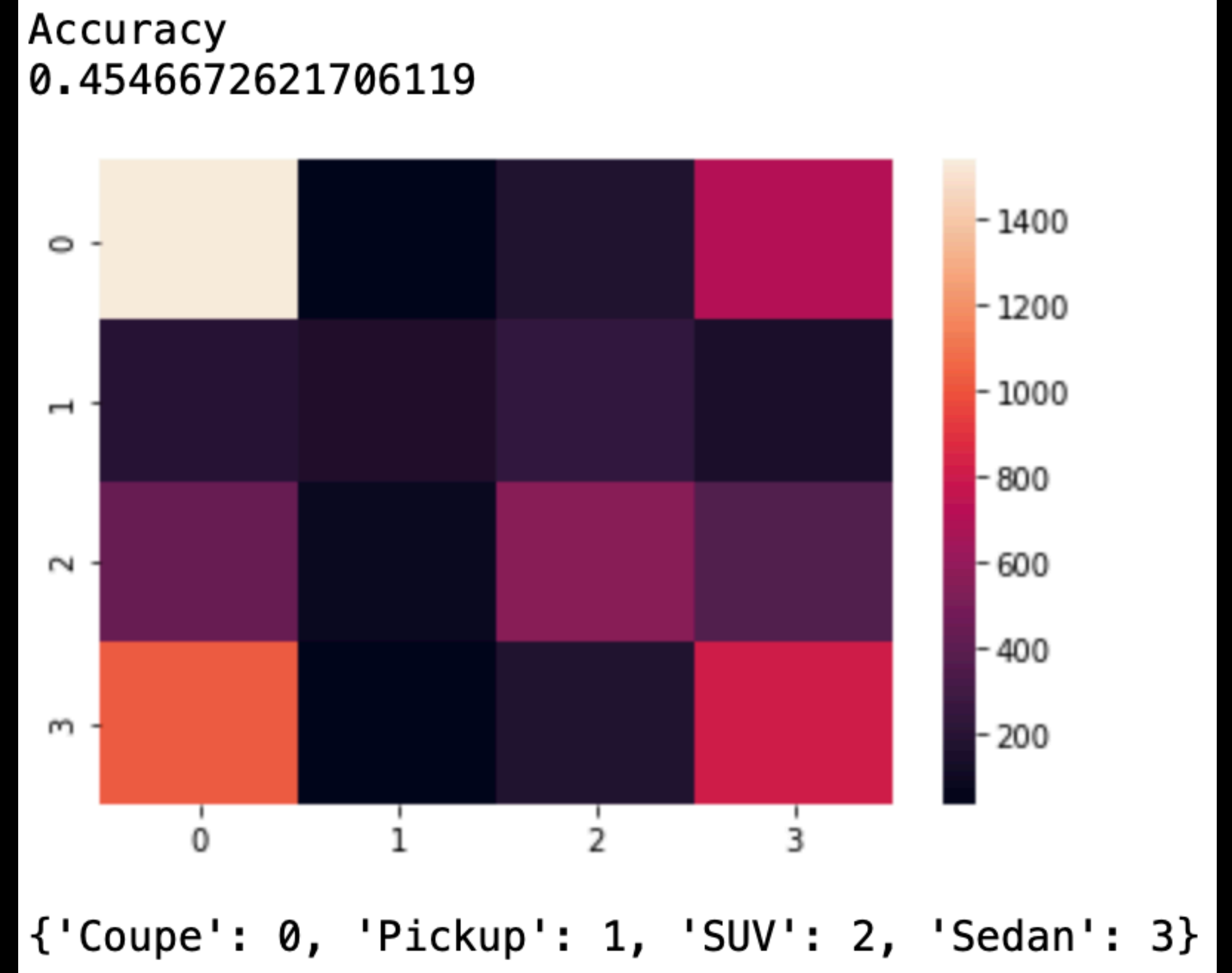

Accuracy
0.4315383658748912

{'Coupe': 0,
 'Hatchback': 1,
 'Minivan': 2,
 'Pickup': 3,
 'SUV': 4,
 'Sedan': 5,
 'Van': 6,
 'Wagon': 7}

Top 4 Grayscale

- 45% accuracy.

- Uses resources efficiently.

Limitations

- Not enough data to fully train a convolutional neural network properly.

- Computational resources

Future work

- More data.

- Move towards exploring the classification of make and model.

- Training on the cost of each vehicle.

Conclusion

- It can be assumed that classifying a car by body type can be successful.

- This model would not be able to classify the body type of a car in a production setting, but it can be improved to be able to power one.

- With this technique it is possible to train a model to predict the cost of a car.

Questions?