



PROJECT PRESENTATION, STANFORD UNIVERSITY FINAL

Motivation & Objective

- The ability to accurately identify a vehicle's make, model and production year from images can be of great value to many applications.
- This project explores the use of a deep convolutional neural network for this very task

Datasets

- A subset of VMMRdb dataset by F. Tafazzoli, H. Frigui, K. Nishiyama [1]
- "Full" dataset: ~118K images with 605 classes
- "Top40" dataset for initial experimentation: \sim 17.7K images with 40 classes
- Train/Dev/Test split: 80/10/10
- On-the-fly data augmentation
- "Weighted loss" for class imbalance

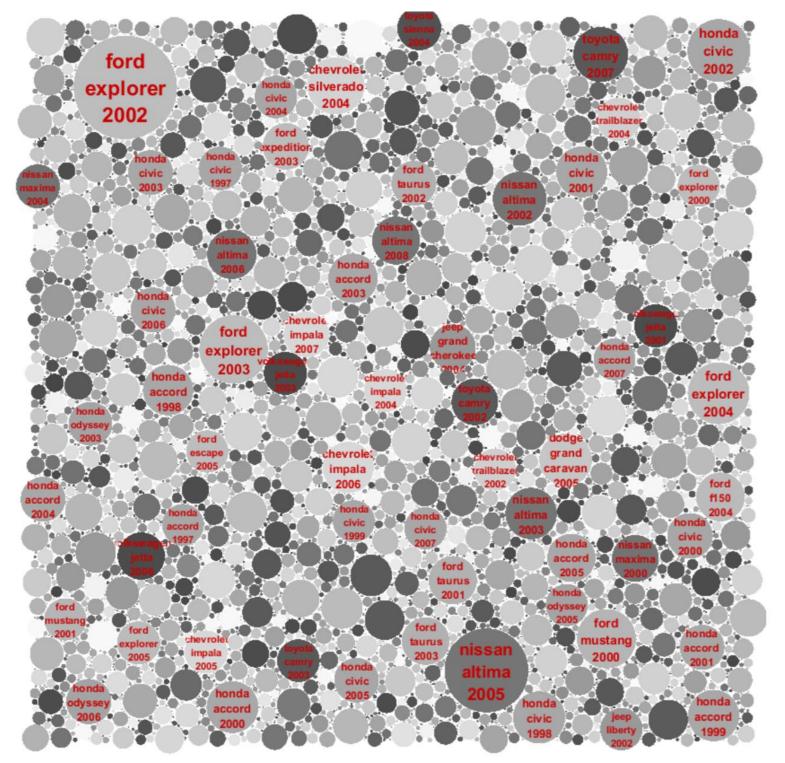
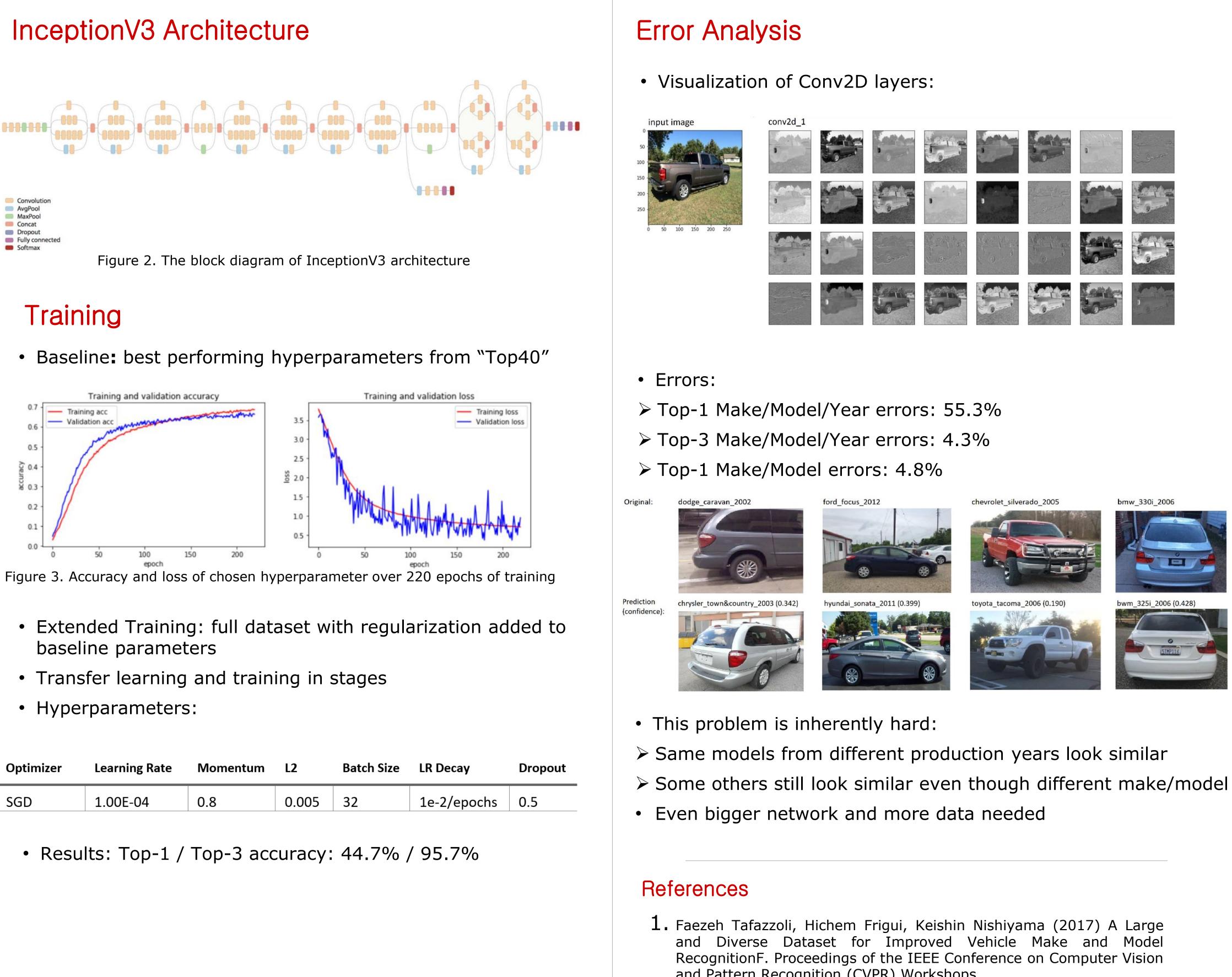


Figure 1. Distribution of images per class in the dataset [1]

What Car Is it? Vehicle Classification with Deep CNN

https://youtu.be/KeXnxIkQPcc Sean Li (seanli19@Stanford.edu)



and Pattern Recognition (CVPR) Workshops