**Capstone Project Ideas**

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1. Lyft object detection based on lidar image
   1. **Description**: In self-driving area, one of the most challenge problem is detect the objects and measure the distance between yourself and objects. Recently, most company are using lidar sensor to capture image. Then they apply different technique to detect 3D location of the objects based on lidar image..
   2. **Goal**: This project is a kaggle competition, the goal is developing a model to detect objects 3D location.
   3. **Dataset**: The dataset can be directly downloaded by Kaggle.
2. Youtube-8M video understanding
   1. **Description**: This project focus on developping a model to predict the content of video. Company like Youtube usually use this model to categorize videos updated by people, which can be cooperated with their recommend system.
   2. **Dataset**: The dataset can be directly downloaded in Kaggle (Youtube 8M)
3. Chinese character OCR
   1. **Description**: Optical character recognition is a very useful technology in real world. There are plenty of area get impact from OCR technique such as clinical healthcare record detection, OCR translator, license plate detection. In these several years, most people focus on developing OCR in English Character, for Chinese character, however, it still has a lot of challenge. Different like english character, Chinese character has more than 10K different classes, which is a big challenge in classification.
   2. **Dataset**: CTW dataset from Tecent, CASIA Chinese Handwriting Databases.