

# CRCV HSAP Presentation

---

November 3, 2020- November 17, 2020

# What I have Done

- Continued with Data Collection— sorted and entered YouTube IDs, dates, and uploader names into Excel spreadsheet— collected a total around 250 videos
  - Collected Ground and Aerial Videos for Atlanta, Auckland, Baltimore, Bangalore, and Belgrade (10 ground videos, 10 aerial videos per city)

# A Diverse Driving Dataset for Heterogeneous Multitask Learning

## Research Paper Reading

- Datasets usually only have a standard number of variations, which is not consistent with real world complexities
- BDD100k is the largest driving video dataset with 100k videos and 10 tasks-- evaluate image recognition, autonomous driving (lots of variations like weather and environmental diversity)
- Most deep learning models require lots of training in order to achieve high accuracy, but for autonomous driving these models are not as simple and tend to overfit domain characteristics
- Visual Datasets-- important for recognition tasks in computer vision, needed for high level image representations, proposed dataset provides these multi-granularity annotations for more in-depth visual reasoning

# Research Paper Reading Cont.

- Driving Datasets-- more popular because of increased attention to autonomous vehicles, understand the complexity of computer vision as it pertains to self-driving cars (could focus on pedestrians and obstructing objects)
- Multitask Learning-- helps with the problem of overfitting by learning from certain tasks
  - Robust Vision Challenge [1] features six vision challenges, where a single model is expected to produce results on multiple vision tasks.
- BDD100K contains diverse scene types such as city streets, residential areas, and highway-- training (70K), validation (10K) and testing (20K) sets

Thank you!  
Any Questions?