

# Tracking High-Speed Chase Vehicles with Machine Learning

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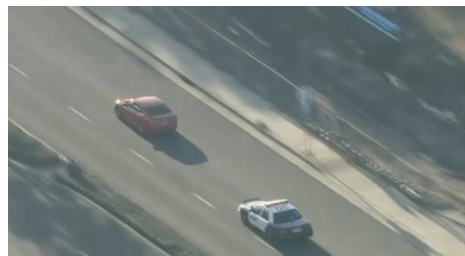
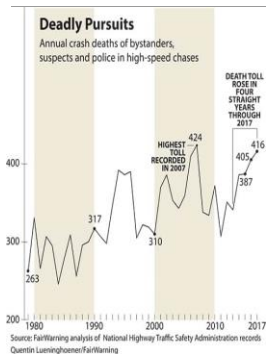
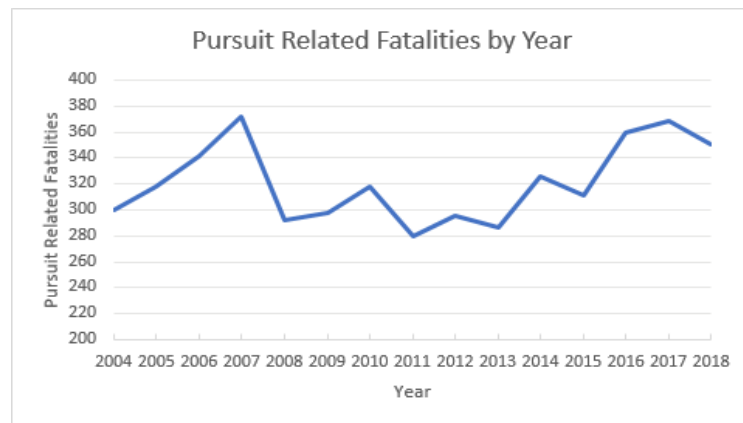
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## Introduction

Police pursuits are highly dangerous to everyone involved.

- Affect not only law enforcement and suspects, but innocent bystanders as well.

Pursuits average 321 deaths a year  
Over 4800 from 2004-2018



High Death Rate for All Involved

Many police chases can be seen on YouTube

## Techniques Used

GOTURN is an object tracker for OpenCV



Should track the vehicle for the duration of the chase

## Summary / Gathered Data

Downloaded videos from YouTube



## Results

Tracker can sometimes track incorrectly.



Direction	Timestamp
West	0.566666667
South-West	0.7
South	3
North-West	3.5
South-West	4.533333333
South	4.6
South-West	4.966666667
South	5
East	6.066666667
South-East	6.1

Output dataset shows change in direction of vehicle and the timestamp for the change

## Future Plans

Our future plans for this project include the following improvements:

1. Prevent incorrect tracking from occurring.
2. Tracking streets the vehicle drives on
3. Create algorithm to predict direction

Dataset: <https://www.youtube.com/playlist?list=PLsdXJHl8zsz4QMsSXVkrDxQwLv277wK>

Code: <https://github.com/louisliv/machinevisionproject>