

Tracking Trucks

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163

HAZARDOUS
MATERIAL
UNCLASIFIED
PLACARD



What is the Problem?

Two words: **truck congestion**

Section 385 of NYC's Vehicle and Traffic Law states that a 53-foot trailer is allowed only limited travel through New York City to reach Long Island, using the following:

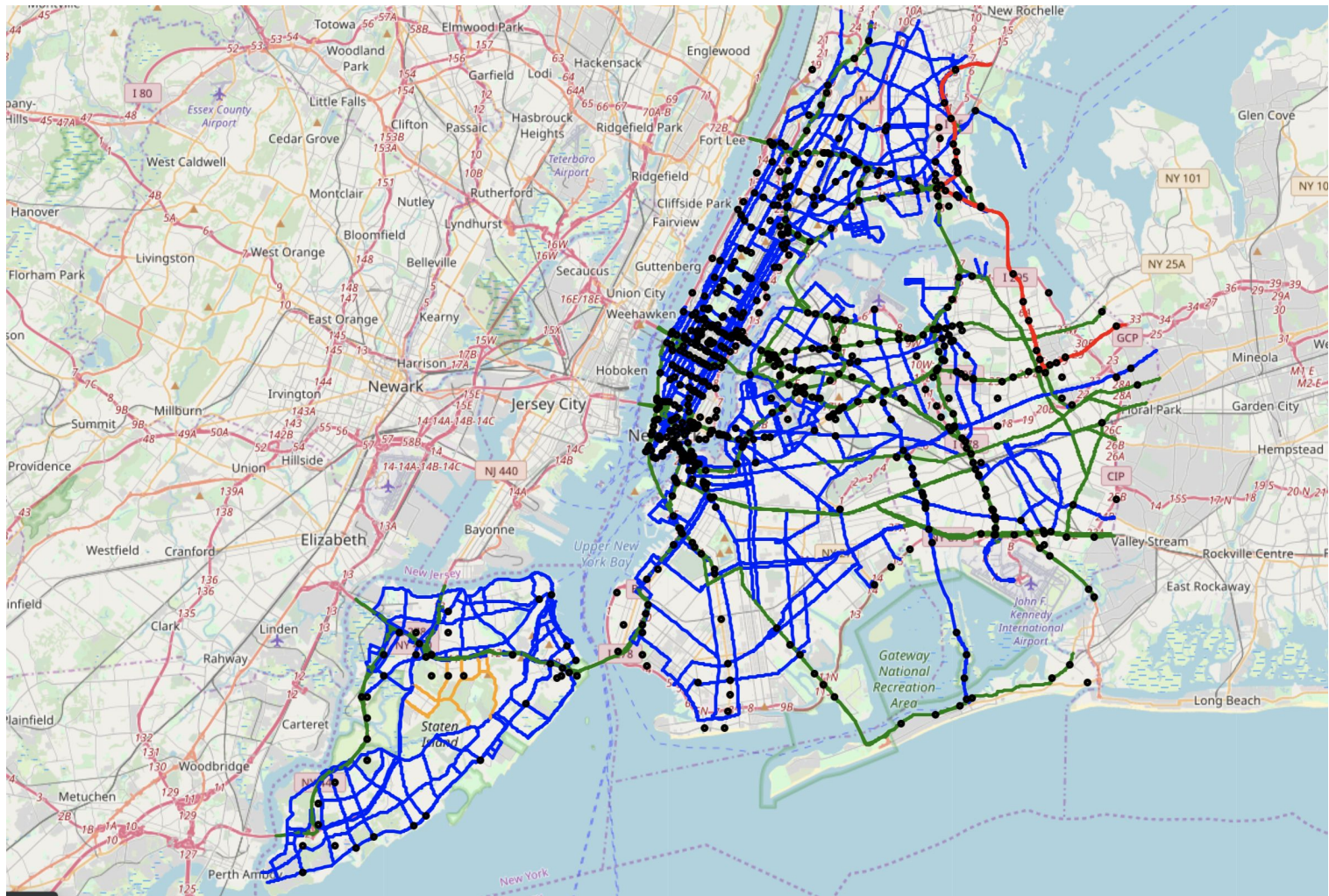
- I-95 - from Bronx/Westchester County line to I-295;
- I-295 - from I-95 to Throgs Neck Bridge to the Long Island Expressway (I-495)
- I-495 - from I-295 to Queens/Nassau County line

Challenge: limit truck traffic while not affecting the delivery of goods to people AND creating a way to monitor truck traffic by reporting 53-foot trailers that drive on NYC roads illegally

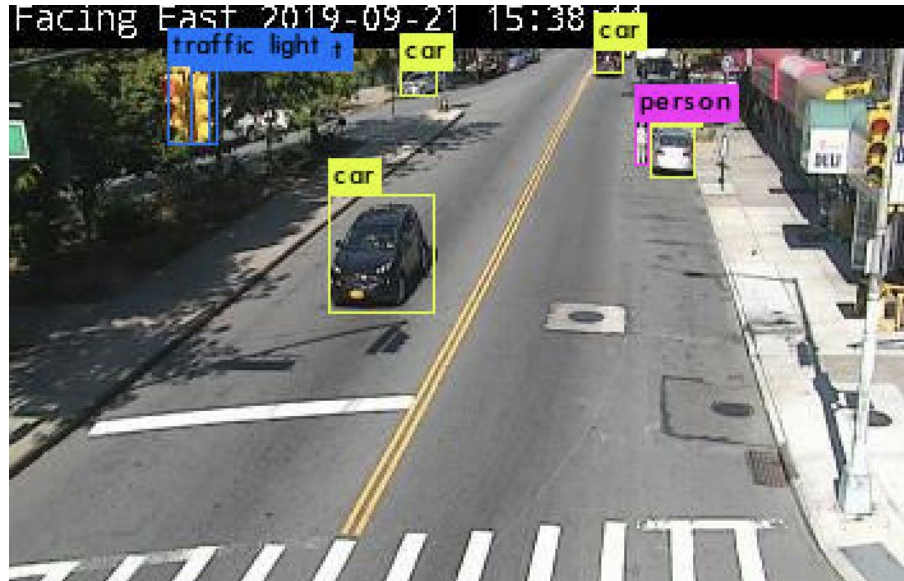
Our Solution Approach

General Steps

1. Identify truck routes
2. Juxtapose that with the routes they **should** be taking
3. Make use of the 723 intersection cameras live feeds hosted by NYC DOT
4. Map camera locations and their identified truck observations
5. Object localization and camera perspective/placement compensation to specifically identify 53-foot trucks



Real-time Detection of objects including Trucks



Grand Ave and Flushing Ave

Truck Reporting App: <https://trucks-reporting.herokuapp.com/>

53 Foot Truck Reporting

[Click Here to use GPS](#)

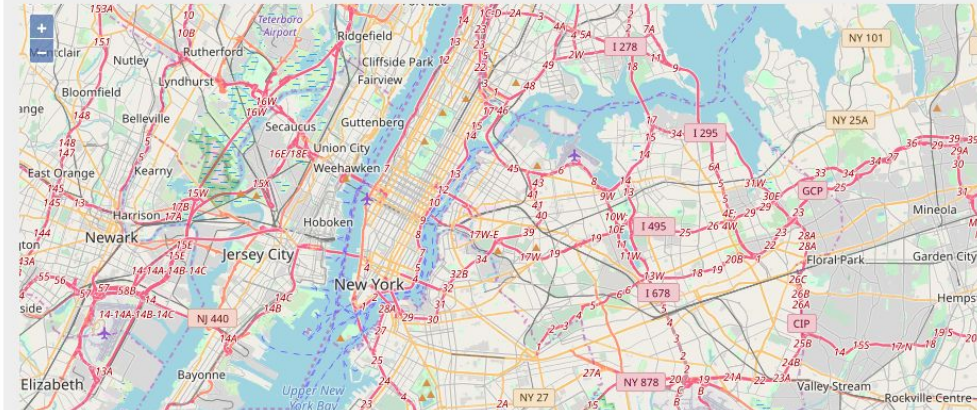
Enter Address Here

License Plate Here

Associated Company

SUBMIT

Our Map



Future Work

1. Long-term collection of image data for sufficient observations of oversized trucks
2. Assess method of identifying 53' trucks with high confidence using perspective-normalized bounding box area
3. Look at truck hotspots in the city and place additional cameras/policemen to monitor them.
4. Determine viability of NYPD summons data for independent quantification illegally sized trucks
5. Train custom object detector for 53' trucks and design detection system to work with real-time traffic cameras.

Caveat: Permitted Over-dimensional Vehicles

Oversized vehicles could be allowed outside of the normally restricted routes if they have a permit:

	permit year	count of vehicles
0	2016	33302
1	2017	51480
2	2018	34752

