

CAPSTONE IDEATION

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GENERAL ASSEMBLY
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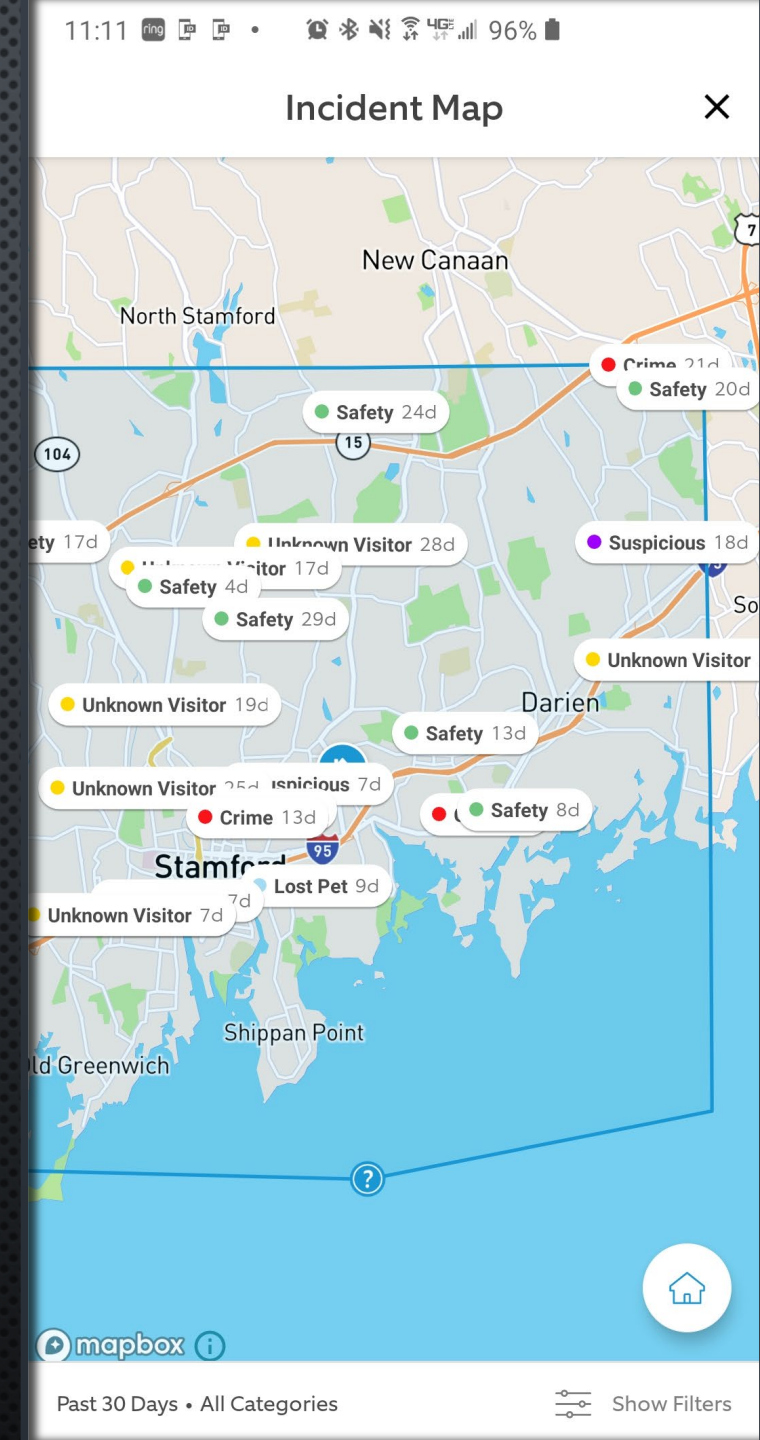
OVERVIEW

- THREE CAPSTONE CONCEPTS
- FOUR WEEKS TO DUE DATE
- ONE RELATIVELY UNSKILLED INDIVIDUAL PRETENDING TO BE A DATA SCIENTIST

CONCEPT #1: PREDICTING CRIMINAL ACTIVITY

PROBLEM STATEMENT:

- TWO YEARS OF REPEATED WAVES OF CAR BREAK-INS AND AUTOMOBILE THEFTS THROUGHOUT THE CITY OF STAMFORD, CT,
- LEVERAGE STAMFORD POLICE DEPARTMENT REPORTS AND RING NEIGHBORHOOD APP DATA
- CAN WE LEVERAGE NLP TO PREDICT THE NEXT POTENTIAL NEIGHBORHOODS IN THEIR ROTATION



CONCEPT #2: TEEN ANXIETY & DEPRESSION DETECTOR

PROBLEM STATEMENT:

- THE NATIONAL INSTITUTE OF MENTAL HEALTH REPORTS THAT ABOUT 3.2 MILLION 12- TO 17-YEAR-OLDS HAVE HAD AT LEAST ONE MAJOR DEPRESSIVE EPISODE WITHIN THE PAST YEAR
- CAN WE APPLY NLP TO SOCIAL MEDIA POSTS TO EVALUATE KEYWORDS THAT CAN SIGNAL INCREASED ANXIETY/DEPRESSION, THEN PREDICT TREND TO A DASHBOARD TO MONITOR STATUS?
 - MAINTAIN PRIVACY OF CONTENT
 - DELIVER A RED/YELLOW/GREEN DASHBOARD





CONCEPT #3: WINE LIST GENERATOR

PROBLEM STATEMENT:

- RESTAURANTS THAT SERVE WINE MAY HAVE WINE LISTS THAT CAN EXCEED OVER 120 PAGES IN LENGTH, BUT THEY MAY NOT MAINTAIN THE INVENTORY TO SUPPORT THE LIST
- CAN WE APPLY NLP AND FEATURE ENGINEERING TO PREDICT AN OPTIMAL WINE LIST THAT A RESTAURANT CAN LEVERAGE?
- BUILD UPON A COMBINATION OF CONSUMER DEMAND, GENERAL WINE TRENDS, CATEGORIZATION, AND RESTAURANT TYPE



SUMMARY/STATUS

CONCEPT	DATA	TOOLS	PROS/CONS	STATUS
RING	<ul style="list-style-type: none">• Ring Neighborhood• Stamford Police Department	<ul style="list-style-type: none">• NLP• CV, TFIDF• Word vectors	<ul style="list-style-type: none">• Relationship with Stamford Gov• Rely on RING• Data may be hard to access	
TEEN	<ul style="list-style-type: none">• 2015 Study Databank• Twitter Scrape	<ul style="list-style-type: none">• NLP• Twitter API,• CV, TFIDF• Word vectors	<ul style="list-style-type: none">• Important cause• Data may be hard to replicate• Aggressive task	
WINE	<ul style="list-style-type: none">• Vivino Wine App• GlobalWineDB	<ul style="list-style-type: none">• NLP• Beautiful Soup,• Scrapy, Selenium• CV, TFIDF• Word vectors• Recommenders	<ul style="list-style-type: none">• Industry Experience• Data readily available	