Opioid Data Center
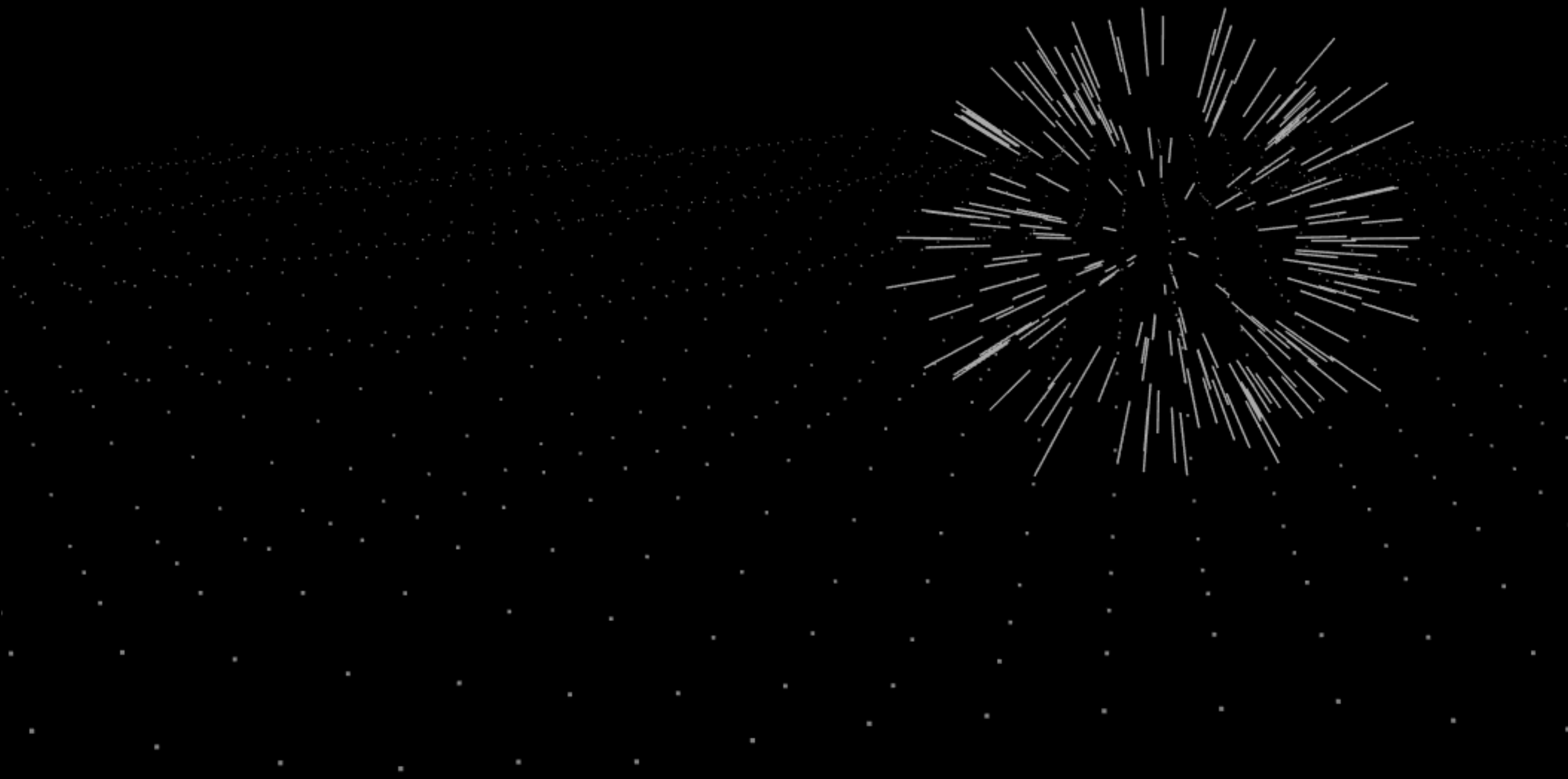
SacHacks 2020

The Team

Jeff Low

UX/UI Designer

Mark Navalta

Developer

Tech Stack for the project

UX/UI Prototyping: Adobe XD, Font Awesome 5 Icon Pack

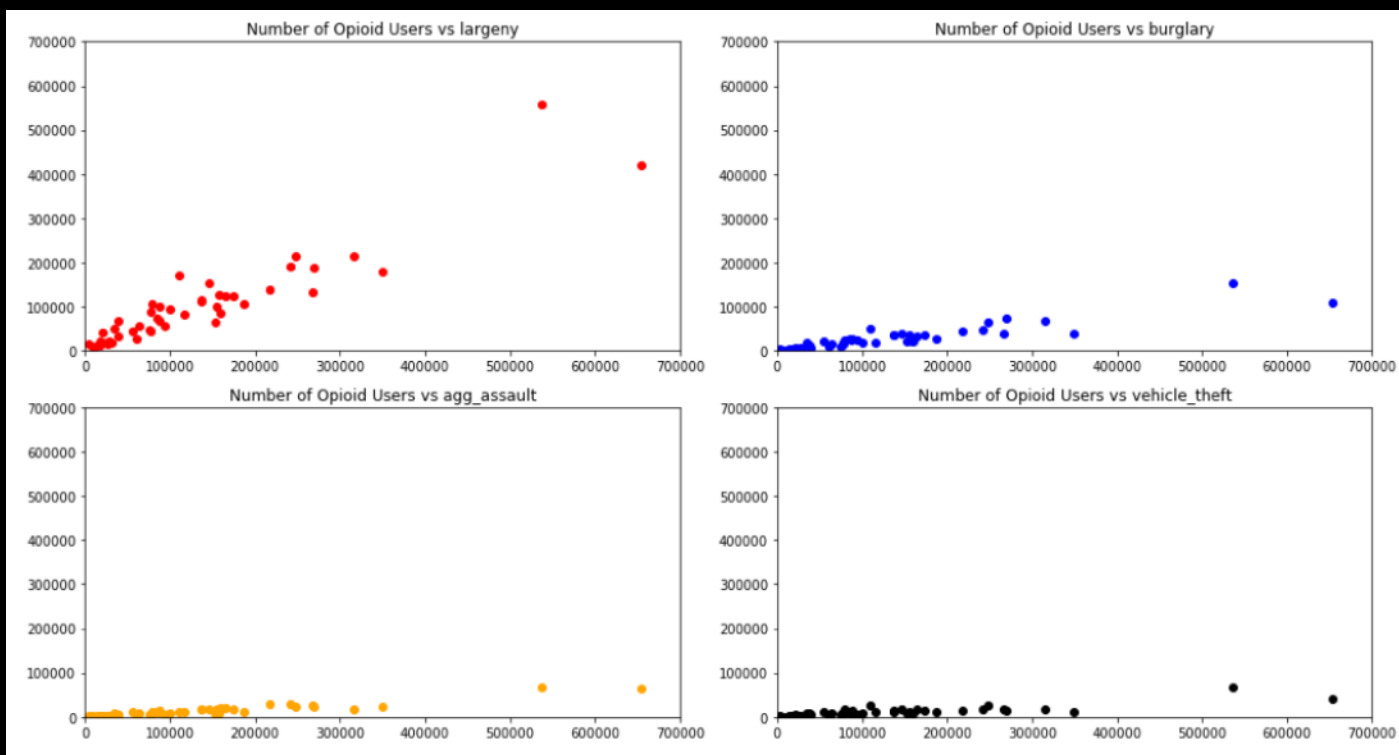**Frontend:** React, Sass, Redux, Redux-Thunk, Chart.js

Backend: Node.js, Node.js MySQL, Axios

Data Analyzation: Python, Pandas, scikit-learn

Questions to ask

- What should we recommend to congress in order to lower opioid overdose?

- Is there a correlation between crime rate and opioid usage?

	larceny	burglary	violent_crime_total	agg_assault	vehicle_theft	number_opioid_users_unique	number_opioid_ordered
larceny	1.000000	0.985599	0.975323	0.963871	0.890910	0.951695	0.938386
burglary	0.985599	1.000000	0.969259	0.958451	0.900118	0.939971	0.931385
violent_crime_total	0.975323	0.969259	1.000000	0.994808	0.919240	0.948946	0.936115
agg_assault	0.963871	0.958451	0.994808	1.000000	0.898670	0.945967	0.930562
vehicle_theft	0.890910	0.900118	0.919240	0.898670	1.000000	0.805990	0.793855
number_opioid_users_unique	0.951695	0.939971	0.948946	0.945967	0.805990	1.000000	0.995765
number_opioid_ordered	0.938386	0.931385	0.936115	0.930562	0.793855	0.995765	1.000000


```
SGDRegressor - -7.027259637824289e+27
SVM - -0.11378687532762144
RandomForest with estimator 1 = 0.9899219983181506
RandomForest with estimator 2 = 0.973983966794288
RandomForest with estimator 3 = 0.9299403457693518
RandomForest with estimator 4 = 0.9459960570887141
RandomForest with estimator 5 = 0.9514773703517412
RandomForest with estimator 6 = 0.9623329945535524
RandomForest with estimator 7 = 0.9652924380354808
RandomForest with estimator 8 = 0.9505446395670845
RandomForest with estimator 9 = 0.9501525740970139
```

How are we going to solve this?

- What should we recommend to congress in order to lower opioid overdose?
  - Invest more into research into mid-level tolerance medicine
  - Improve social media awareness in terms of advertising
  - Mandatory subject in K-12 schools

- Is there a correlation between crime rate and opioid usage?
  - Yes.

- Is there a link between all the information that we've collected on the website?
  - Yes, we are able to find the root cause and we still need to find a solution to that cause.

What's next?