A green truck is visible on the left side of the image, moving along a road. The background shows a blurred landscape with green fields and a clear sky. A large red rectangular box with a white border is centered over the image, containing the title and authors' names.

# Auto-Oops Analysts

Logan Barnes, Jessie Lee,  
and Edmond Magpantay

# Theme

- Took the Fatality Analysis Reporting System Data from the year 2021 to analyze automotive accidents, along with details at the time:
  - Weather Conditions
  - Accident Types
  - Lighting Conditions
- Also compare amount of accidents in a state to state population.

# Coding Approach

- Logan was responsible for creating the map using leaflet that would plot out the accidents based upon their coordinates, and show relevant data, like state and weather conditions.
- Edmond was responsible for creating the html where the elements would be shown, the dropdown for selecting the state and for the bar graph that would show the frequency of lighting conditions of a state.
- Jessie was responsible for creating the database on SQLite, the Flask API that would pull data from the database and it's routes, and the horizontal bar graph showing the top 10 accident types in a state.

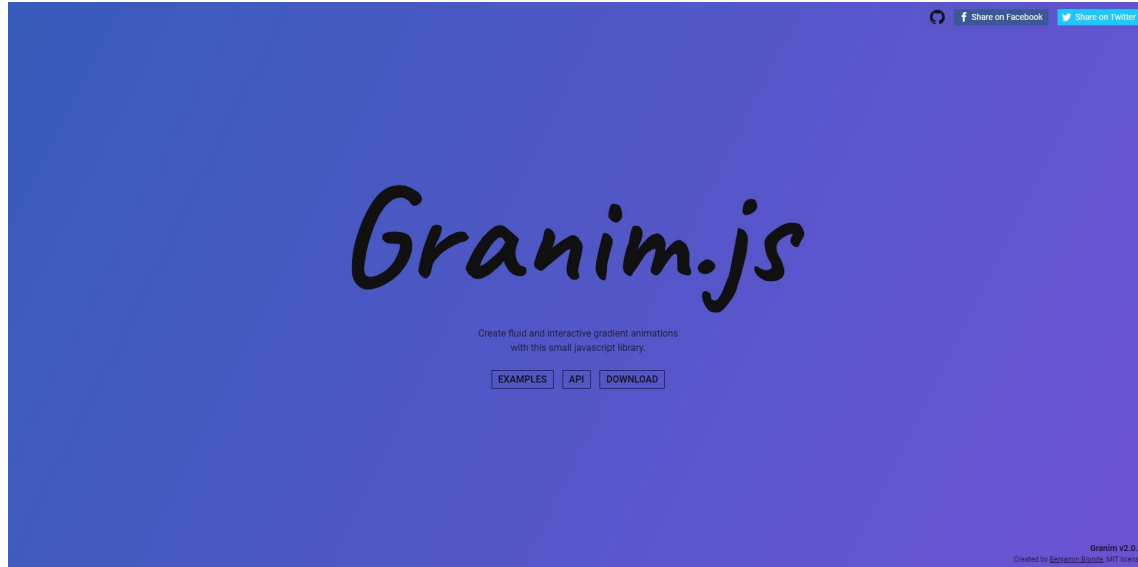
# Data Wrangling Technique

- Jessie created the SQLite database where we imported the FARS data from 2021.
- The data originally had 80 columns. Pulled relevant columns based upon documentation [HERE](#). Decided upon: Accident Types, Latitude, Longitude, Weather Conditions, and Lighting Conditions. Jessie created different routes that slimmed down each item in a JSON to only include what relevant columns for our plotting needs.

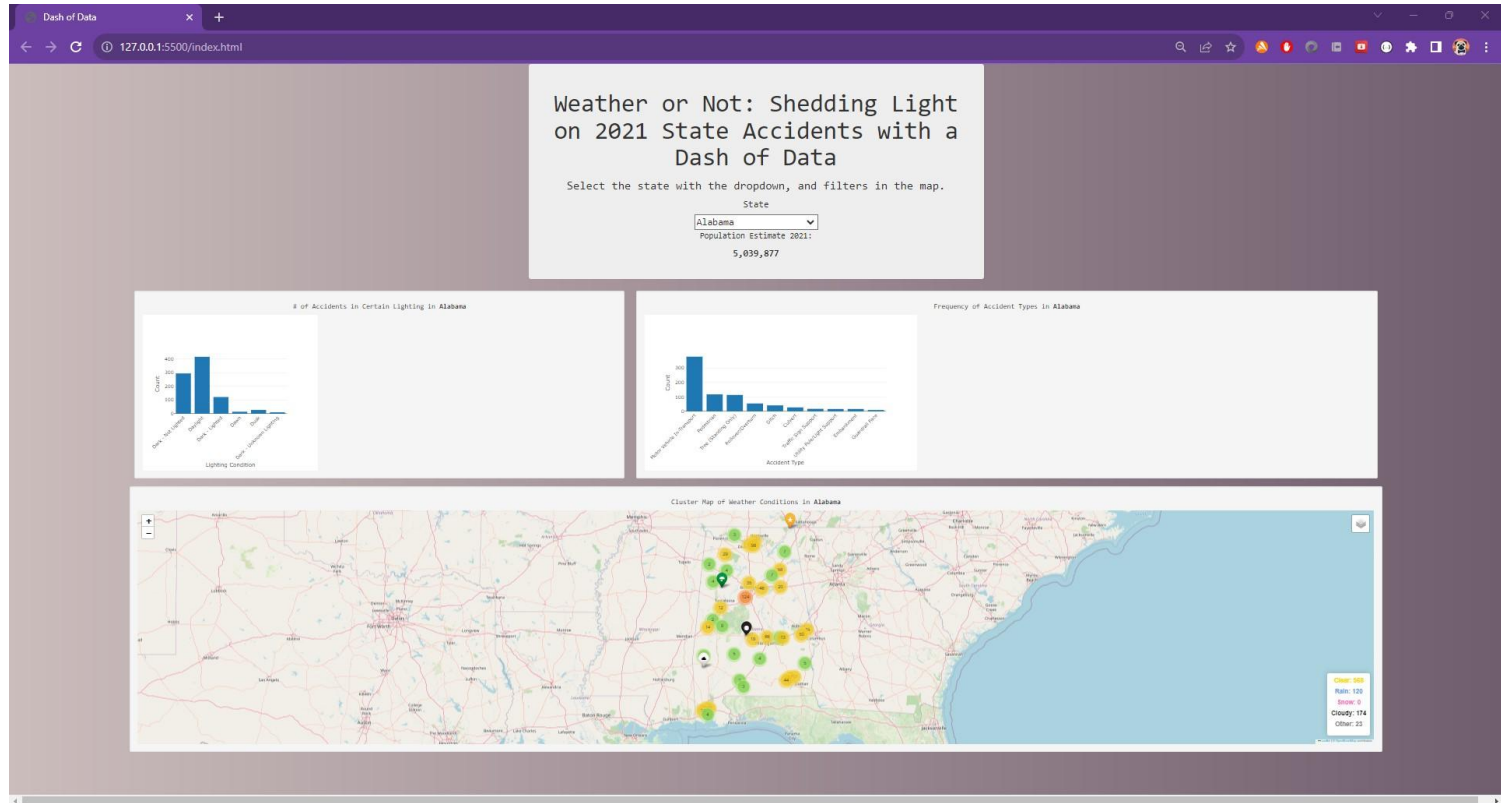
```
def welcome():  
    """List all available API Routes."""  
    return(  
        f"<h3>Available Routes:</h3>"  
        f"/api/v1.0/lighting_conditions<br>"  
        f"/api/v1.0/weather_conditions<br>"  
        f"/api/v1.0/accident_type<br>"  
        f"/api/v1.0/population<br>"  
    )
```

# JavaScript Library

- The JavaScript Library we used was [Granim.js](#) which creates a gradient animation as a background to our website.



# Final Visualization



# Learnings

- Most of the accidents typically happen during during the day time when it's clear.
  - 2nd place belongs to Dark but Lit.
- Motor vehicle-in transport make up the majority of accidents.
  - 2nd place belongs to Pedestrians
- Wyoming, the state with the smallest population, does not have the least amount of accidents.