Wildfire Data Science Challenge

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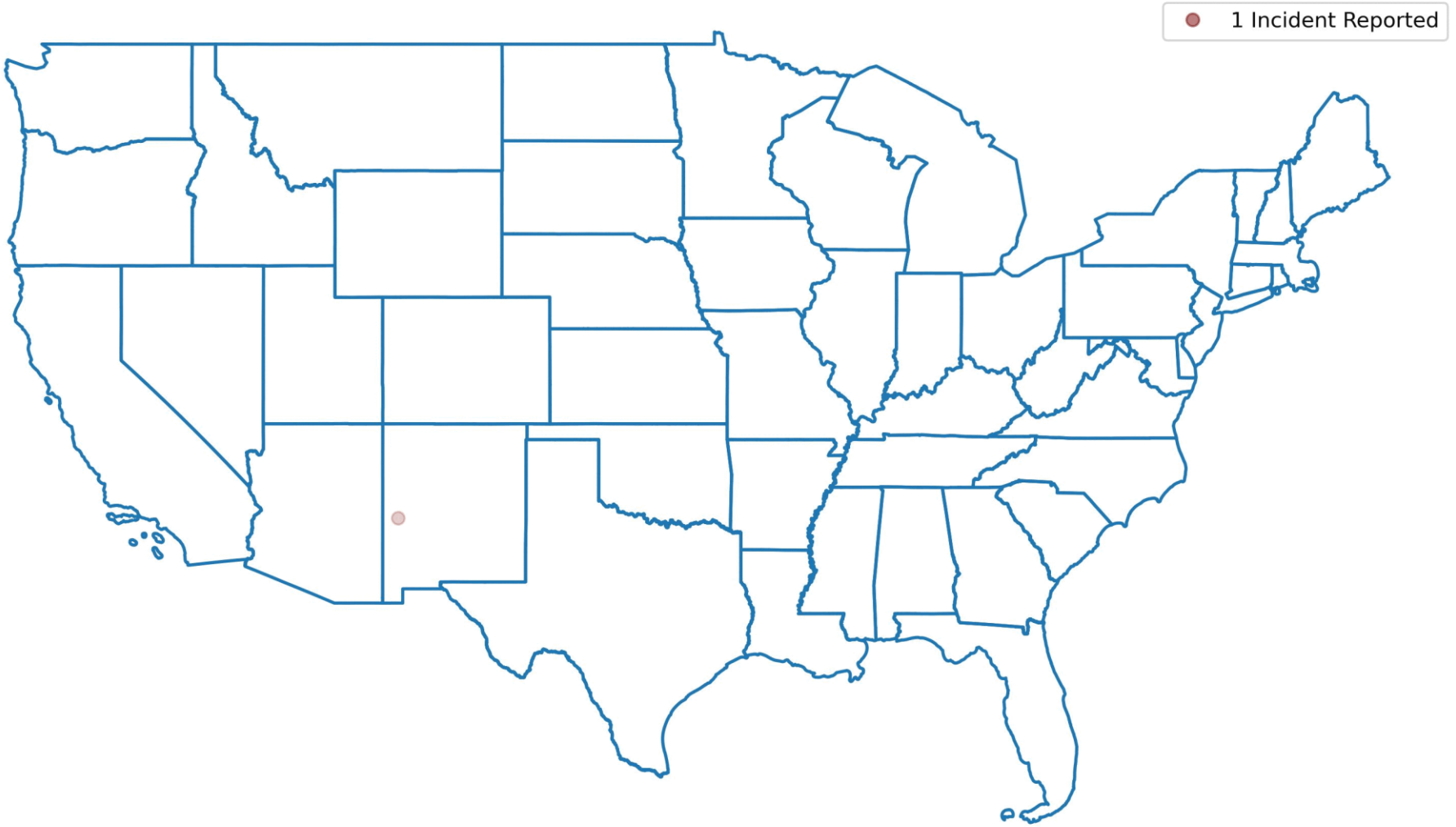
(Team: I'll Figure It Out Later)

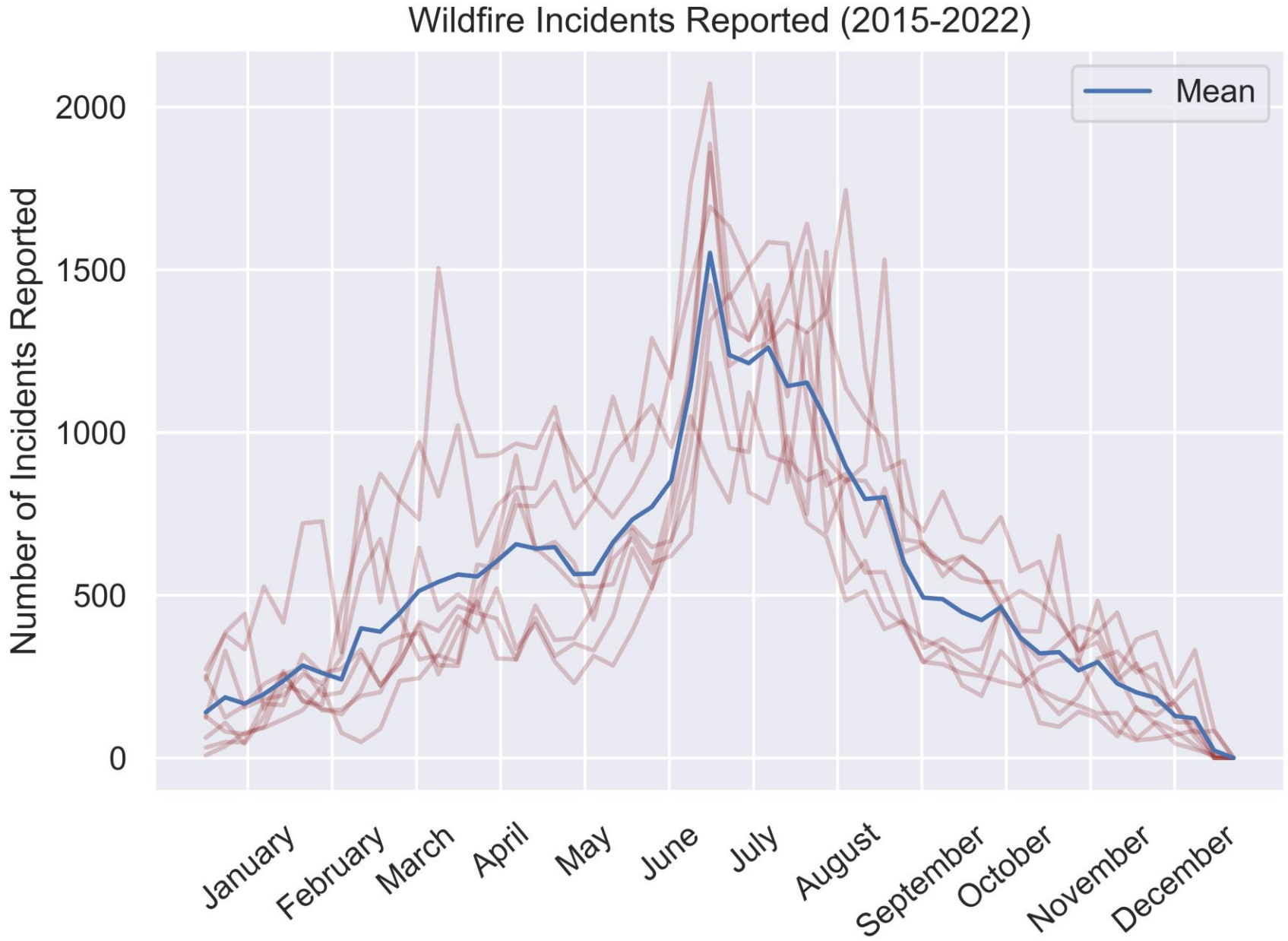
Visualizing Historic Data

Wildfire Incidents Reported (Monthly)

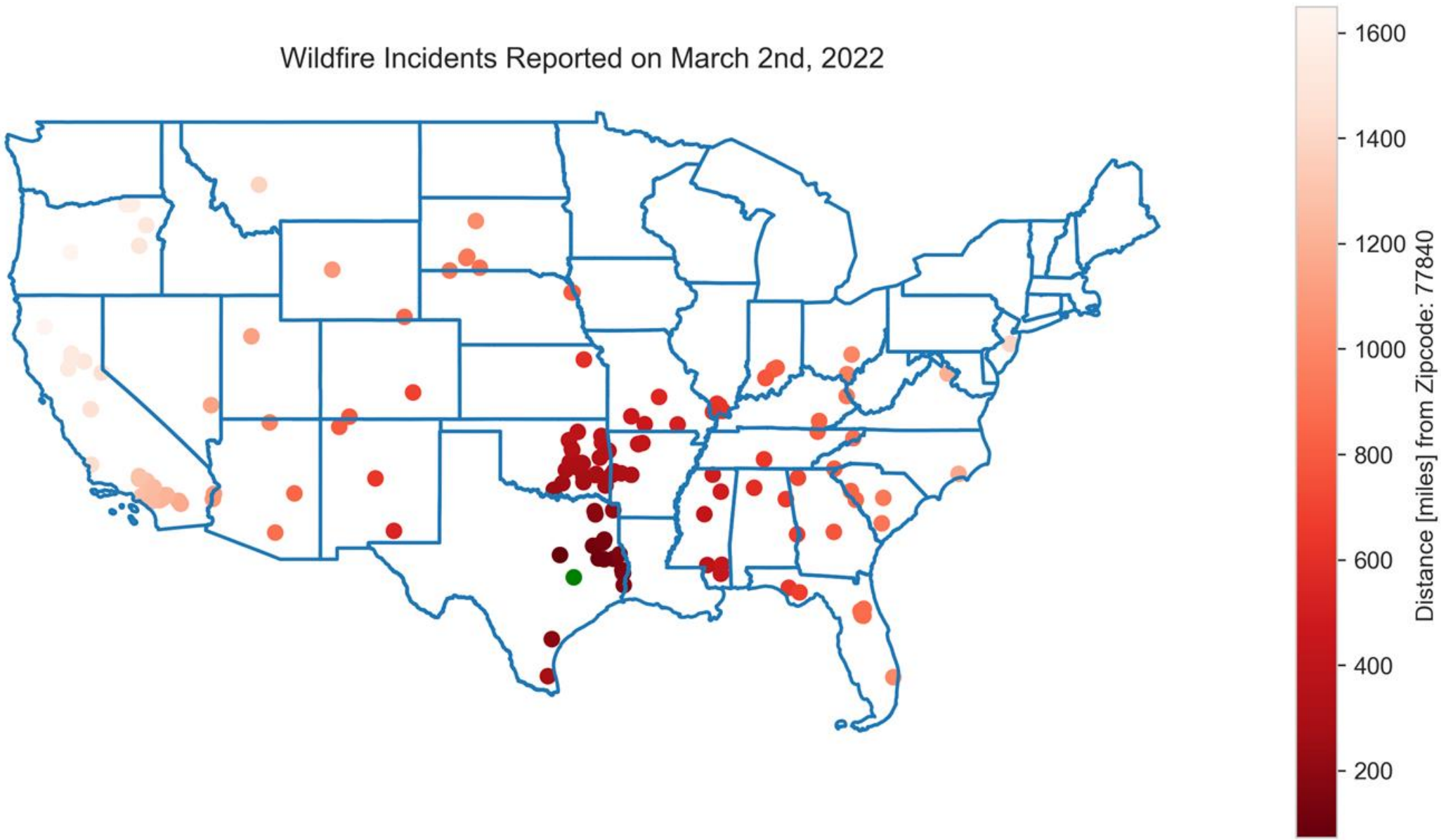


January 2014

Source: National Interagency Fire Center


Wildfire Incidents Reported (2015-2022)
Mean
Number of Incidents Reported
2000
1500
1000
500
0
January
February
March
April
May
June
July
August
September
October
November
December

Leveraging Social Media


Wildfire Incidents Reported on March 2nd, 2022
1600
1400
1200
1000
800
600
400
200
Distance [miles] from Zipcode: 77840

Haversine Formula

$$\varphi = \text{lattitude}$$
$$\lambda = \text{longitude}$$
$$r = 3956\ [mi]$$

$$hav(\theta) = \sin^2\left(\frac{\varphi_2 - \varphi_1}{2}\right) + \cos(\varphi_1) \cdot \cos(\varphi_2) \cdot \sin^2\left(\frac{\lambda_2 - \lambda_1}{2}\right)$$

$$d = 2r \arcsin(hav(\theta))$$

Code

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```
def get_wildfire_update(zipcode: int, distance_range: float=100, days_ago: int = 0) -> str:
  ...
  return "On Date [date]:"
         "There are [quantity] reported wildfires within [#] miles of zipcode [#]."
         "The closest reported wildfire is [#] miles [distance]."


client.create_tweet(text=get_wildfire_update(zipcode: 77840, distance_range=100, days_ago=364))
```

Raspberry Pi

Twitter Frontend

Thank you for the opportunity!