ITINERARY OPTIMIZATION WITH MACHINE LEARNING

DID YOU KNOW?

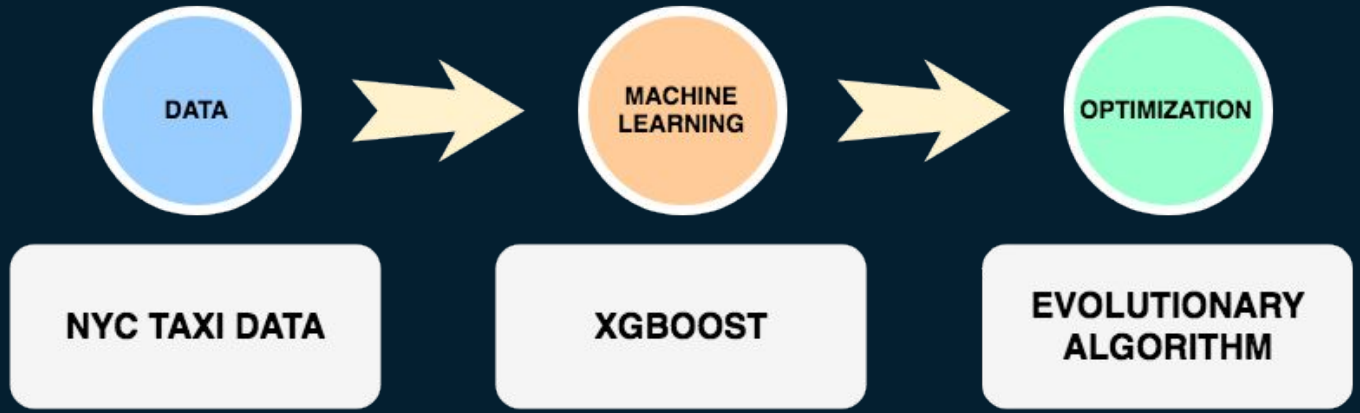
- UPS drivers have to read 74 pages about delivery efficiency
- It would cost UPS $30 million per year if each driver drives just one unnecessary mile each day

MY APPROACH

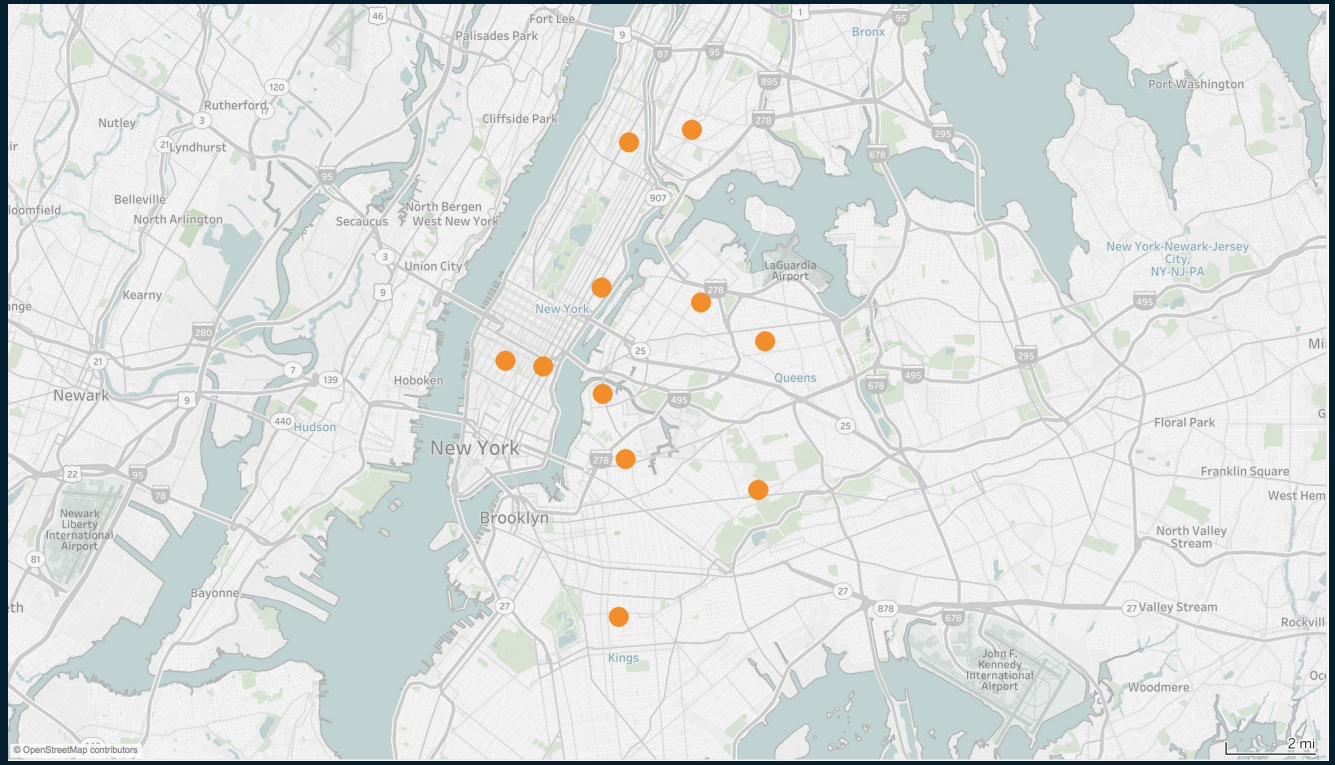
- Combine machine learning and traditional mathematical models
- And calculate shortest travel times for multiple locations

DESIGN PROCESS

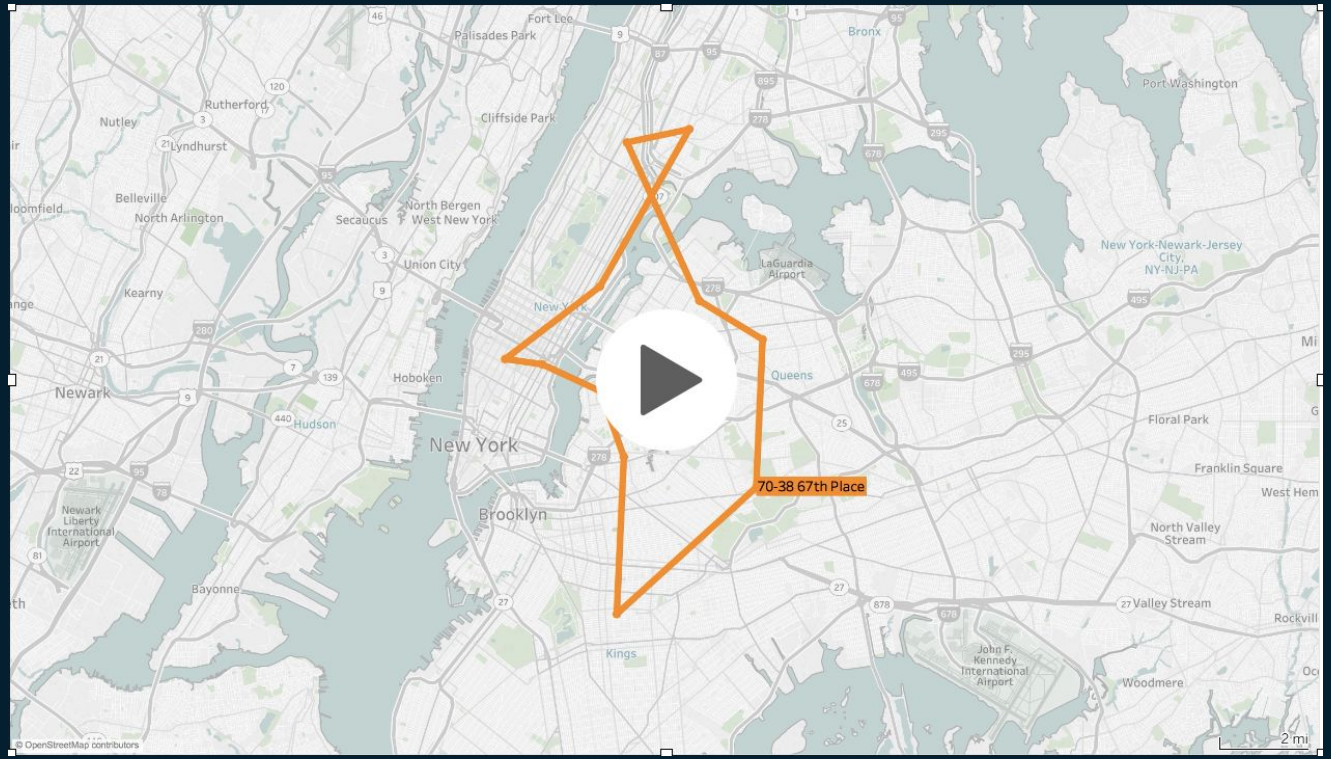
1. 2016 New York City taxi data: over 120M data points
2. Machine learning to predict travel times
3. Genetic algorithm to take predictions and construct time-efficient trip itinerary



DEMO: PLAN A ROUTE GIVEN 11 POINTS ON THE MAP



DEMO: RECOMMENDED VISIT ORDER (travel time: 3hr 2m)



FURTHER WORK

- Routes based on time of the day
- Exact street pathing (Google Maps API)
- Incorporate weather data and forecasts
- Who else can benefit from it: FedEx, USPS, DHL, or any other delivery service with determined daily delivery locations

THANK YOU!

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