NYC DATA SCIENCE ACADEMY

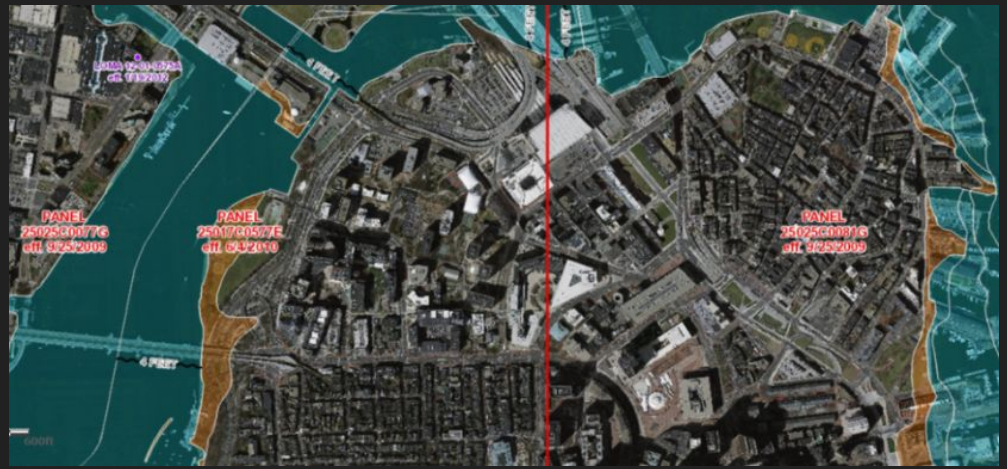
A Flood of FEMA Claims

R Shiny App Development

-Michael Link

Problem Statement

- FEMA is tasked with:
  - Creating 100 year floodplain,
  - Forcing people to buy flood insurance,
  - Reimbursement after floods

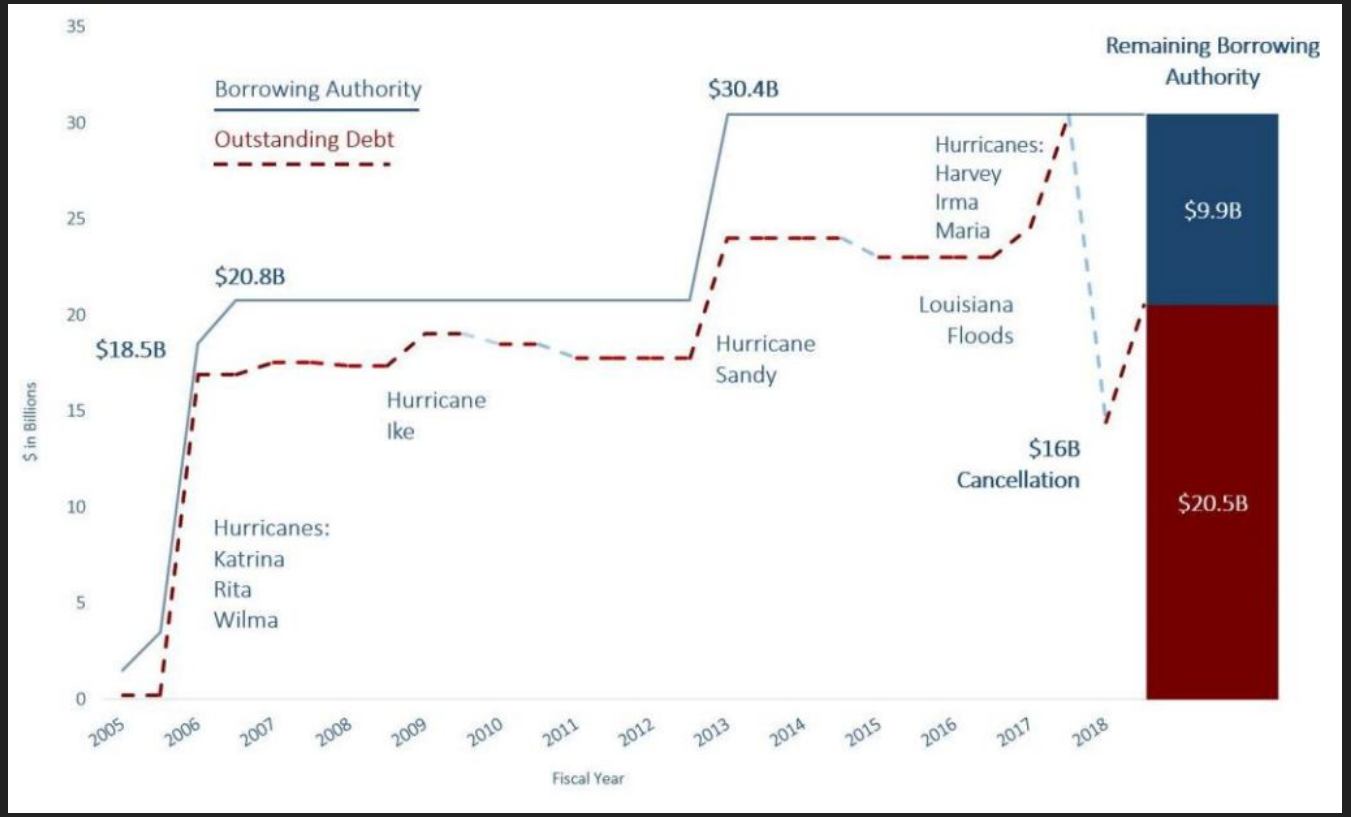


- https://www.fema.gov/letter-map-amendment-letter-map-revision-based-fill-process

Problem Statement

- Can FEMA stay financially afloat (pun intended)?

Problem Statement



- https://www.fema.gov/media-library-data/1522167351921-a5e457454262dd100e2f15a7210d21c5/Watermark_FY18_Q1_v6_508.pdf

Valid Questions

- Why have there been so many catastrophic storms in last 15 years?
- Is the flood insurance program sinking due to climate change or bad floodplains?
- Where is FEMA losing the most money?
- When has FEMA lost the most money?
- How quickly is FEMA currently losing money?

Valid Questions

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Dataset

- 30 years of Flood Claims
  - Example - “I Joe lost 12,600 dollars in property damage on April, 4th 2012”
  - 2 Million Rows
- Key Columns:
  - Geographic:
    - State, County Code
  - Claims:
    - Property and Content Losses
- Additional Datasets
  - Census regions and divisions
  - FEMA Major Storms
  - FIPS County Codes

Target Audience & Business Proposition

- Audience
  - Flood Insurance Program Managers
  - Federal Agents (Senators, Congresswomen, etc.)
- Business Proposition
  - Saving money by shifting focus to few states rather than the whole country
  - Convincing federal agents to open their wallets

Links

- GitHub Repository:
  - https://github.com/Data-Science-Link/A_Flood_of_FEMA_FACTS
- Shiny App URL:
  - https://data-science-link.shinyapps.io/fema_flood_claims/
- This Presentation
  - https://github.com/Data-Science-Link/A_Flood_of_FEMA_FACTS/tree/master/documentation