

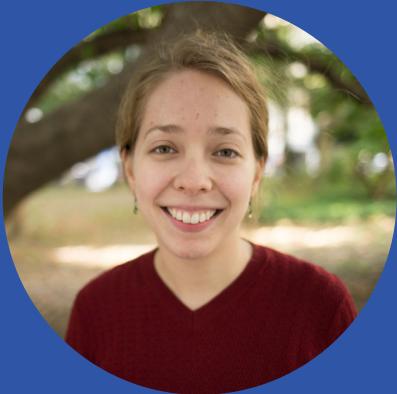


# DATA TEAM

NEW YORK CITY COUNCIL

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Using Data to Improve the Lives of New Yorkers



**Rose Martinez**  
Senior Data Scientist



**Julia Fredenburg**  
Data Visualization Specialist



**Brook Frye**  
Data Scientist



**Ben Witte**  
Data Scientist



**James Subudhi**  
Senior Data Scientist



**Alaa Moussawi**  
Chief Data Scientist



**Nick Solomon**  
Data Scientist

# MEET THE DATA TEAM

DATA TEAM: NYC COUNCIL

DATA@COUNCIL.NYC.GOV  
COUNCIL.NYC.GOV/DATA

@NYCCOUNCIL  
#NYCCDATA



**Yulin Shen**  
Full Stack  
Web Developer



**Johnathan Chei**  
Full Stack  
Web Developer



**Enan Rahman**  
Full Stack  
Web Developer



**Chris Stephenson**  
Full Stack  
Web Developer

# MEET THE WEB DEVELOPMENT TEAM

Data Team: Mission Statement

# PROMOTE A DATA-DRIVEN APPROACH TO THE NYC COUNCIL'S DECISION MAKING PROCESS

# A BILL BECOMES A LAW

WEB DEV



STEP 1

COUNCIL MEMBER IDEA

STEP 2

LEGISLATIVE REQUEST (LS)

STEP 3

DRAFT BILL



DATA TEAM

STEP 4

INTRODUCE BILL

STEP 5

PUBLIC HEARINGS

STEP 6

VOTING

STEP 7

MAYORAL DECISION

WEB DEV



STEP 8

BILL BECOMES LAW

# OVERSIGHT & SMART LAWS

Use Data to Check Agency Claims and  
Inform Legislation

# PROCESS

## UNDERSTAND QUESTION

Work with City Council Legislative Committee staff to understand the problem or question

## FIND DATA

Find relevant data on the Open Data Portal, from Agency Reports to the NYC City Council, and from Agency Websites

## ANALYZE DATA

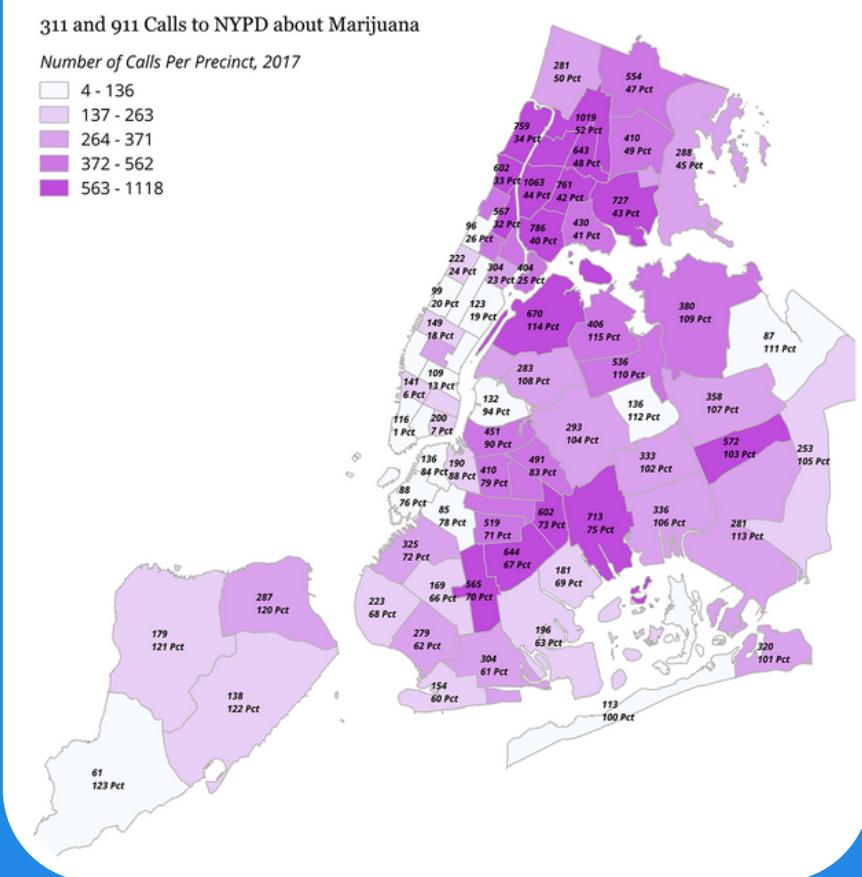
Use a variety of tools to analyze question at hand, with statistics, mapping, machine learning, etc

## VISUALIZE DATA

Take result of analysis and produce easy to understand result: chart, graph, map, simple bullet list of results, dashboards.

# NYPD: MARIJUANA ARRESTS AND 311 CALLS

## 311 & 911 Calls to NYPD about Marijuana 2017

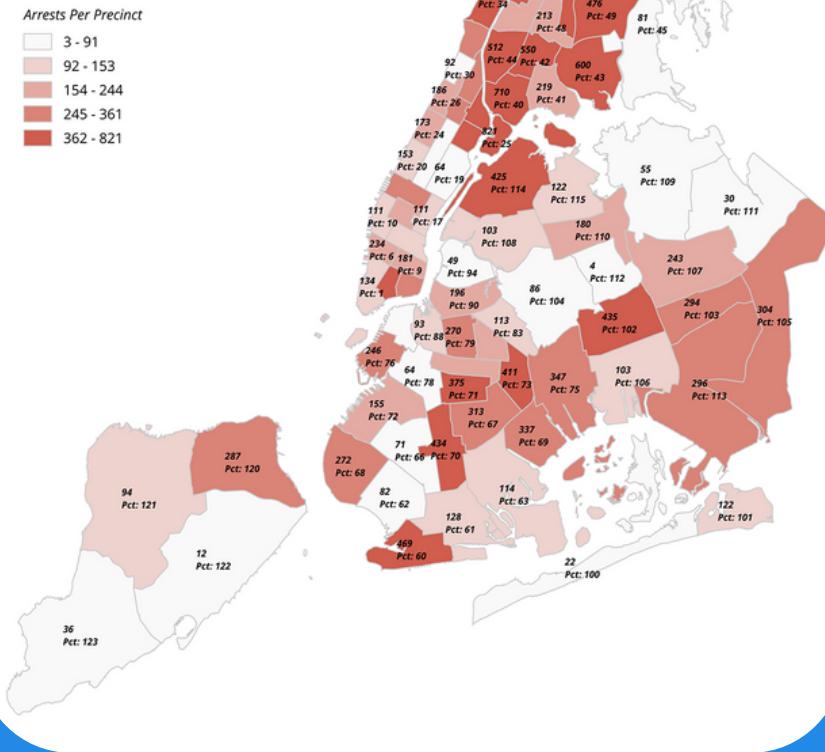


**NYPD arrests** and gives summonses to **people of color** for **marijuana** possession at a **higher rate** than for white people.

# NYPD Arrests for Marijuana Possession 2017

Arrests by Penal Law 221.05 and Penal Law 221.10(1)  
Marijuana arrests are arrests as the top charge.

## **Unlawful Marijuana Possession**



NYPD stated in testimony that was because of "**community complaints**," which the NYPD receives via **311 or 911**. We checked their statement.

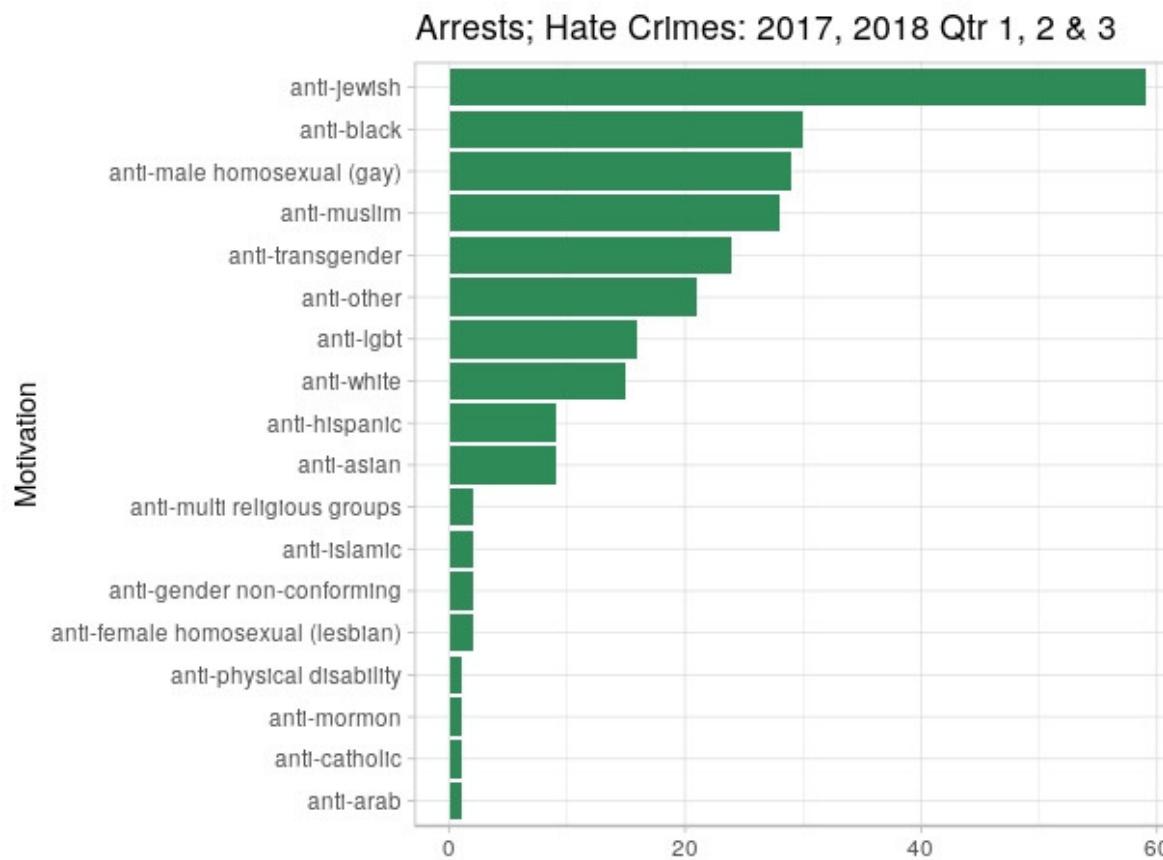
# TURNSTYLE JUMPING



The MTA released a report saying that the **MTA** was having **trouble financially** because of a policy to **not ticket people** who **jump** the **turnstyles** and **don't pay** for a subway ride.

Using data from the MTA's API and our statistical methods, we found that the **analysis was murky** at best.

# ANALYZING HATE CRIMES IN NYC



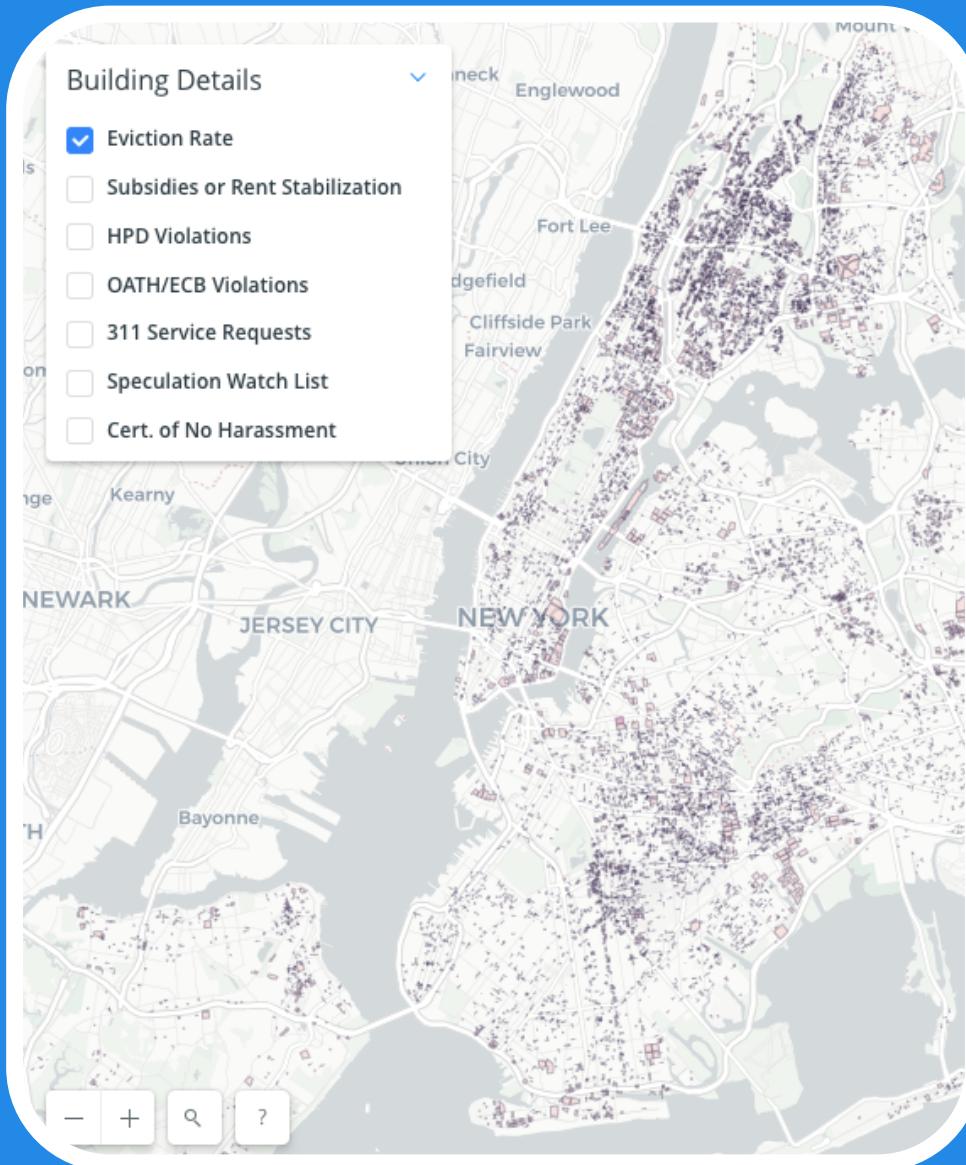
The Committee on Public Safety had questions about the state of **hate crimes** in NYC.

They held a hearing with NYPD to understand the increase in hate crimes

We accessed a data set from NYPD website to explore who was being targeting and whether or not there has been an increase across time.

There now exists an **office** for the **Prevention of Hate Crimes.**

# EVICTIONS IN NYC



[council.nyc.gov/public-advocate/evictions/](http://council.nyc.gov/public-advocate/evictions/)

The Data Team was curious about where **residential evictions** impacted New Yorkers the most.

The **Department of Investigations** had a searchable application of **Marshals evictions** on their **website**.

We saw that the **Bronx** and central **Brooklyn** were experiencing the **highest rate** of **evictions**.

Of properties with evictions, close to half (45%) have a **rent stabilized unit**, the multifamily dwellings (60% ) are the most common building type and **half** (54%) were **built** between **1910-1930**.

Eventually, summer of 2018, we got the **dataset** on the **Open Data Portal**.

# DATA LAWS

Reporting bills require City Agencies to report  
specific info on their activities to the  
City Council and/or on the Open Data Portal

# PROCESS: DATA LAWS

## UNDERSTAND QUESTION

Work with City Council Legislative Committee staff to understand the problem or question

## GET MORE DATA

Oftentimes we suggest more specific geographic info so that the report is more useful for data scientists and developers

## PRIVACY CONCERNs

Balance the need for privacy for things like domestic violence with the need to do oversight of City Agency operations

## FUTURE PROOF

Law has to stand the test of time. Can't require a specific technology because we may not use that technology in the future.

# PAY EQUITY - REPORTING BILL



Dataset via the Mayor's Office of Data Analytics (MODA) will allow public to see any **pay disparities** of City employees by **race, gender, ethnicity**.

This same report will be posted publicly on the MODA website and the Open Data Portal.

The Council will have access to personal employment data via **API**.

Holds the City **accountable** for **correcting pay disparities** in the **city workforce**.

# MAYOR'S OFFICE OF DATA ANALYTICS (MODA)



This bill would codify into the Charter the Mayor's  
**Office of Data Analytics (MODA).**

The reasons that we did this to make sure MODA will  
**exist in the future.**

The office uses analytics tools to prioritize risk more strategically, deliver services more efficiently, enforce laws more effectively and increase transparency.

# WEB DEVELOPMENT TEAM

Making smarter legislation through automation

# PROCESS

## COLLECT AND DEFINE REQUIREMENTS

Manager's blueprint => Communication with end users => Break down into deliverables and tasks

## UI DESIGN

How the website looks

## DEVELOPMENT

Coding start from the most common features: CRUD operations  
(Additional features: tag display, tour guide, pagination, email notification...)

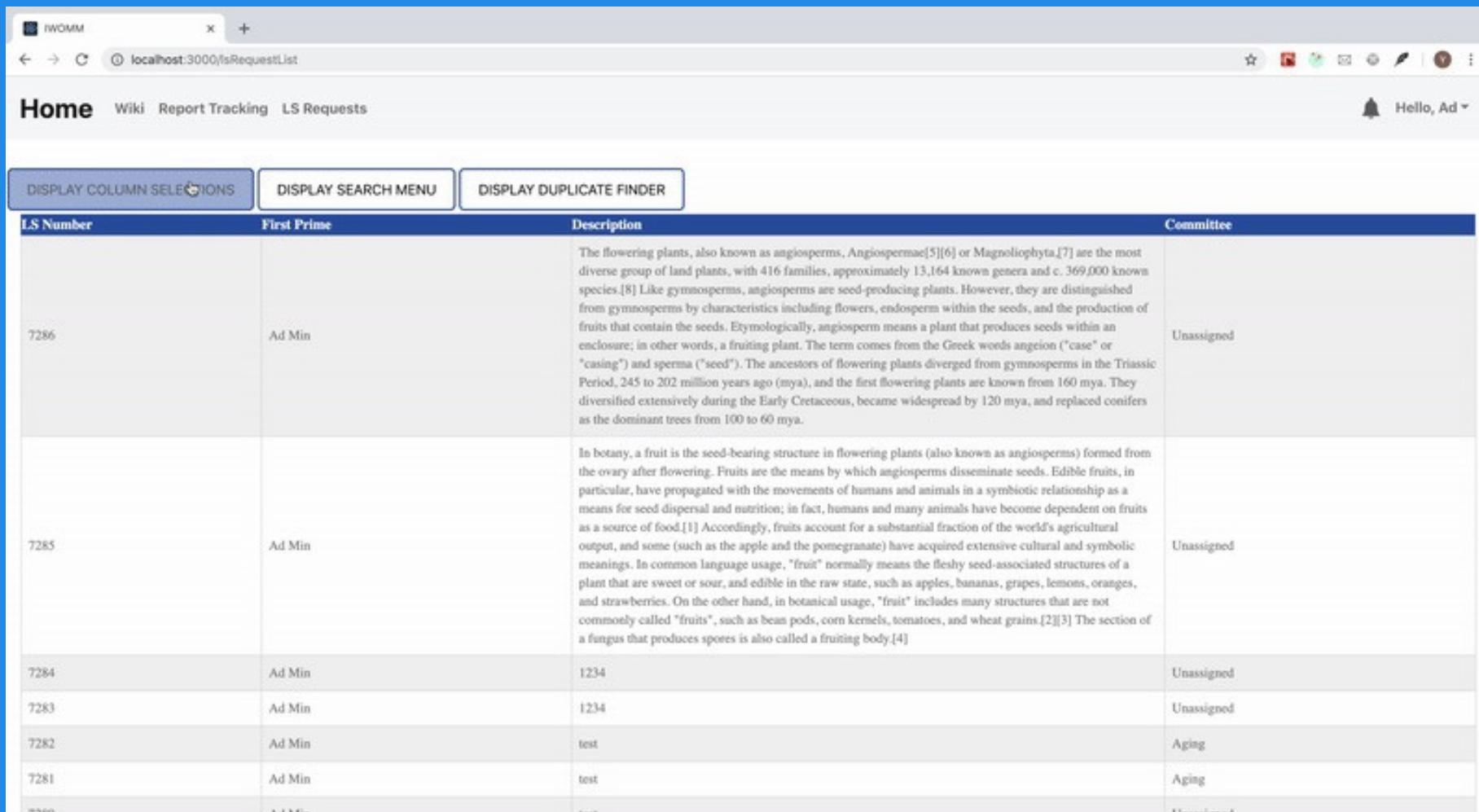
## TESTING

Give credentials to a few end users for testing and gaining feedbacks

## RELEASE

Website deployment on Cloud Server

# LEGISLATIVE REQUESTS (LS) SYSTEM



The screenshot shows a web-based application titled "LEGISLATIVE REQUESTS (LS) SYSTEM". The interface includes a top navigation bar with links for "Home", "Wiki", "Report Tracking", "LS Requests", and a user profile. Below the navigation is a toolbar with buttons for "DISPLAY COLUMN SELECTIONS", "DISPLAY SEARCH MENU", and "DISPLAY DUPLICATE FINDER". The main content area displays a table with columns: "LS Number", "First Prime", "Description", and "Committee". The table contains several rows of data, each representing a legislative request. The "Description" column for row 7286 provides a detailed explanation of angiosperms, mentioning their diversity, characteristics, and evolutionary history. The "Description" column for row 7285 provides a general definition of a fruit in botany. Other rows show entries for LS numbers 7284, 7283, 7282, and 7281, all assigned to the "Ad Min" committee.

LS Number	First Prime	Description	Committee
7286	Ad Min	The flowering plants, also known as angiosperms, Angiospermae[5][6] or Magnoliophyta,[7] are the most diverse group of land plants, with 416 families, approximately 13,164 known genera and c. 369,000 known species.[8] Like gymnosperms, angiosperms are seed-producing plants. However, they are distinguished from gymnosperms by characteristics including flowers, endosperm within the seeds, and the production of fruits that contain the seeds. Etymologically, angiosperm means a plant that produces seeds within an enclosure; in other words, a fruiting plant. The term comes from the Greek words ἄγκειον ("case" or "casing") and σπέρμα ("seed"). The ancestors of flowering plants diverged from gymnosperms in the Triassic Period, 245 to 202 million years ago (mya), and the first flowering plants are known from 160 mya. They diversified extensively during the Early Cretaceous, became widespread by 120 mya, and replaced conifers as the dominant trees from 100 to 60 mya.	Unassigned
7285	Ad Min	In botany, a fruit is the seed-bearing structure in flowering plants (also known as angiosperms) formed from the ovary after flowering. Fruits are the means by which angiosperms disseminate seeds. Edible fruits, in particular, have propagated with the movements of humans and animals in a symbiotic relationship as a means for seed dispersal and nutrition; in fact, humans and many animals have become dependent on fruits as a source of food.[1] Accordingly, fruits account for a substantial fraction of the world's agricultural output, and some (such as the apple and the pomegranate) have acquired extensive cultural and symbolic meanings. In common language usage, "fruit" normally means the fleshy seed-associated structures of a plant that are sweet or sour, and edible in the raw state, such as apples, bananas, grapes, lemons, oranges, and strawberries. On the other hand, in botanical usage, "fruit" includes many structures that are not commonly called "fruits", such as bean pods, corn kernels, tomatoes, and wheat grains.[2][3] The section of a fungus that produces spores is also called a fruiting body.[4]	Unassigned
7284	Ad Min	1234	Unassigned
7283	Ad Min	1234	Unassigned
7282	Ad Min	test	Aging
7281	Ad Min	test	Aging
7280	Ad Min	test	Finance

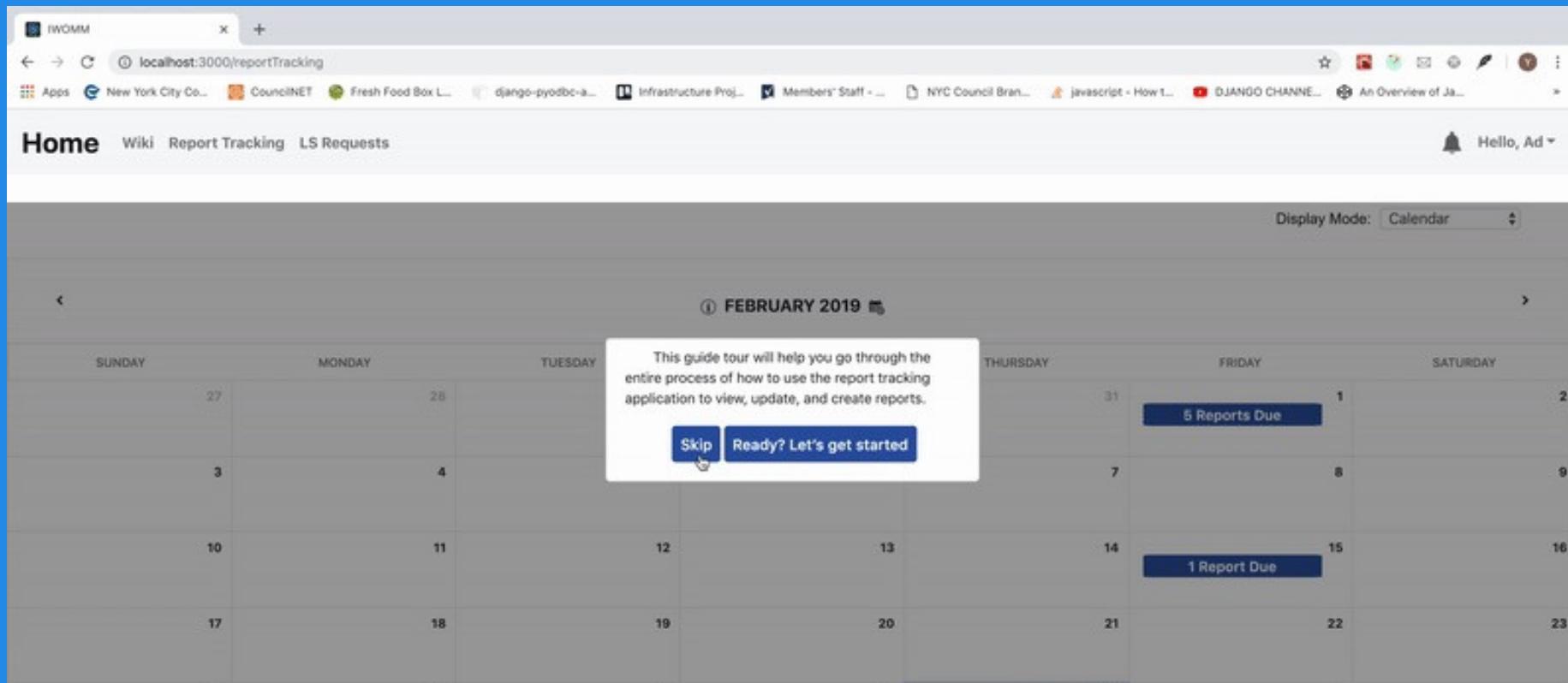
## Features:

- + Create, update, view **legislative requests**
- + Column **toggling, filtering**
- + **Duplicate** finding

This is innovative because services provided in our existing system are so limited.  
Current spreadsheet is too large and hard to find the target information.

# REPORTS CALENDAR

Reporting bills require **City Agencies** to deliver **data reports** to the City Council. This tool allows staff to **track** those **reports**.



## Features:

- + Create, update and view data **reports**
- + Switch between different display mode
- + Filtering; **Downloading reports**
- + **Quick search** based on month and year

This is innovative because it's **painful** to **manually track** all those reports in a spreadsheet.

Visualizing the raw data as a calendar with interactive functions is nicer and more efficient.

# LEGAL WIKI PAGE

The screenshot shows a web browser window with the URL [localhost:3000/wiki#section-0](http://localhost:3000/wiki#section-0). The page title is "History". On the left, there's a sidebar with "Wiki" navigation links: Wiki Home, Create Subject, Update Subject, Create Page, and Update Page. Below that is a "Parent Subjects" section with a link to "History". The main content area starts with a heading "History" and a detailed paragraph about the history of the New York City Council. It then moves to a "Term limits" section with a paragraph about term limits and a note about a legal challenge.

## History

The history of the New York City Council can be traced to Dutch Colonial times when New York City was known as New Amsterdam. On February 2, 1653, the town of New Amsterdam, founded on the southern tip of Manhattan Island in 1625, was incorporated as a city under a charter issued by the Dutch West India Company. A Council of Legislators sat as the local lawmaking body and as a court of inferior jurisdiction. During the 18th and 19th centuries the local legislature was called the **Common Council** and then the **Board of Aldermen**. In 1898 the amalgamation charter of the City of Greater New York renamed and revamped the Council and added a New York City Board of Estimate with certain administrative and financial powers. After a number of changes through the ensuing years, the present Council was born in 1938 under a new charter which instituted the Council as the sole legislative body and the New York City Board of Estimate as the chief administrative body. Certain functions of the Council, however, remained subject to the approval of the Board.

A system of proportional representation known as Single Transferable Vote seated a 26-member Council in 1938 to serve two-year terms. The term was extended to four years in 1945 to coincide with the term of the mayor. Proportional representation was abolished in 1947, largely from pressure from Democrats, who played on fears of Communist council members being elected (two already had).<sup>[10]</sup> It was replaced by a system of electing one Council Member from each New York State Senate district within the city. The Charter also provided for the election of two Council Members-at-large from each of the five boroughs. In June 1983, however, a federal court ruled that the 10 at-large seats violated the United States Constitution's one-person, one-vote mandate.<sup>[11]</sup>

In 1989, the Supreme Court ruled that the Board of Estimate also violated the one-person, one-vote mandate. In response, the new Charter abolished the Board of Estimate and provided for the redrawing of the Council district lines to increase minority representation on the Council. It also increased the number of Council Members from 35 to 51. The Council was then granted full power over the municipal budget, as well as authority over zoning, land use and franchises. In 1993 the New York City Council voted to rename the position of President of the City Council to the Public Advocate. As the presiding officer, the Public Advocate was an ex officio member of all committees in the Council, and in that capacity had the right to introduce and co-sponsor legislation.<sup>[citation needed]</sup> However the city charter revision of 2002 transferred the duties of presiding officer from the Public Advocate to the Council Speaker; the Public Advocate remains a non-voting member of the Council.<sup>[12]</sup>

## Term limits

A two-term limit was imposed on City Council members and citywide elected officials in a 1993 referendum. The movement to introduce term limits was led by Ronald Lauder, a cosmetics heir. In 1996, voters turned down a Council proposal to extend term limits. Lauder spent \$4 million on the two referenda.

However, in 2008, under pressure from Mayor Michael Bloomberg (who, like many Council members, was facing the end of his two-term limit at that time), the Council voted 29–22 to extend the limit to three terms; the Council also defeated (by a vote of 22–28, with one abstention) a proposal to submit the issue to public referendum.<sup>[13]</sup>

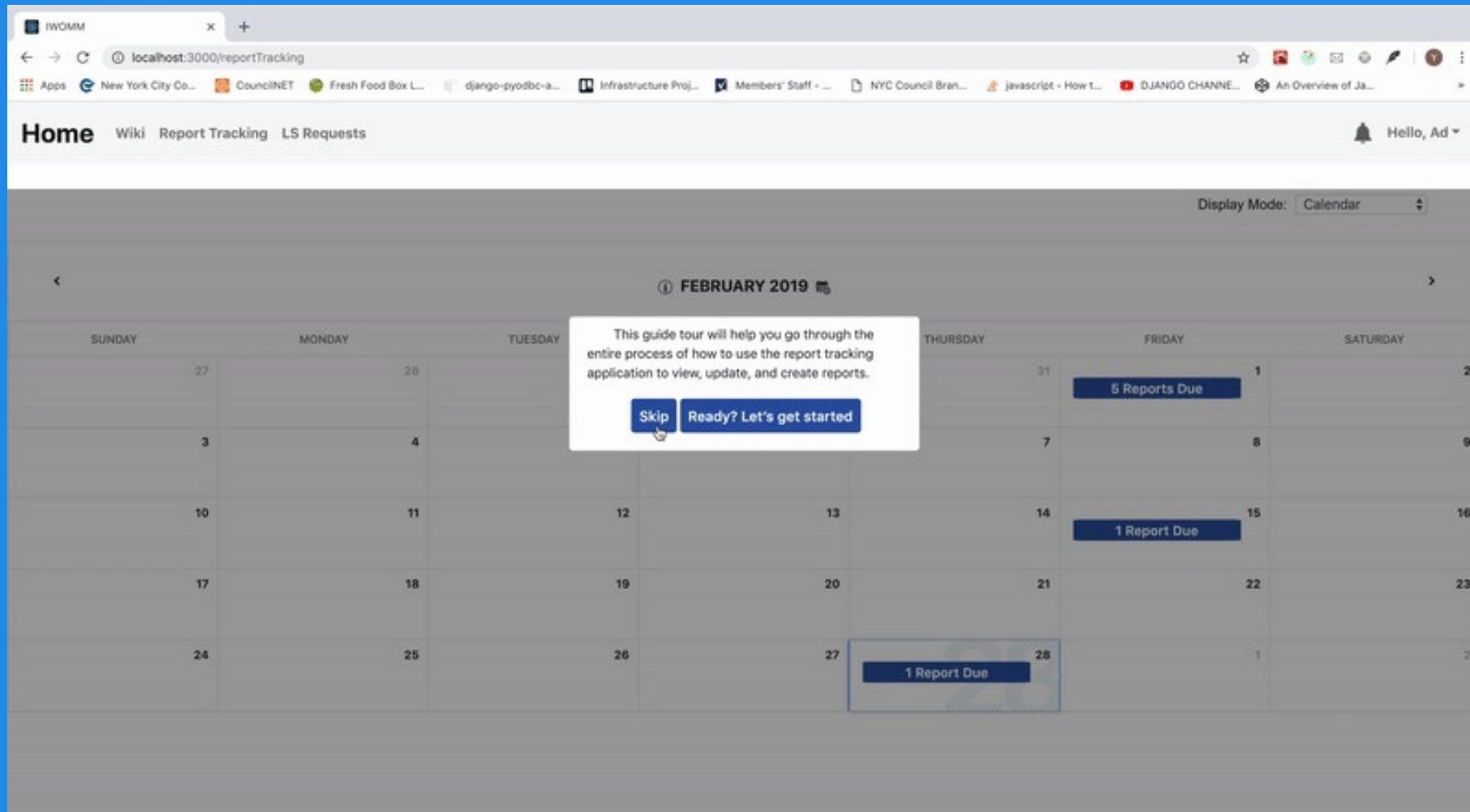
Legal challenges to the extension of term limits failed in federal court. The original decision by Judge Charles Sifton of the United States District Court for the Eastern District of New

## Features:

- + Create, update and view **content of different levels**
- + Leave comments for **team cooperation**

This is innovative because it helps **gather** all the **related information** in a center and **categorize** the information properly to different levels.

# "LITTLE MAGIC" -- TOUR GUIDE



Why?

- + Hard to **provide training courses** for all the end users
- + May seem complicated for non-tech people to use

How?

**Popup tour guide** first time enter this application; Press "i" icon if end users have confusion about the application;

# DATA CULTURE

## SUCCESS STRATEGIES

- Support from leadership
- Visualize work for easy understanding

## CHALLENGES

- See data as necessary part of the process
- Sometimes bring in Data Team in too late
- Managing expectations: garbage in and garbage out
- Our own projects – proactive – bills are reactive sometimes

## SUMMARY

- Making smarter laws to improve the lives of New Yorkers

# THANKS! 🤝

## DATA TEAM: NYC COUNCIL



Data@Council.NYC.gov



Github.com/NewYorkCityCouncil



Council.NYC.gov/Data



@NYCCouncil #NYCCData