

# MTA Service Status Project Final Report

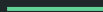
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# PROBLEM: GET CAUGHT IN SUBWAY DELAYS

- People don't always know if their train is delayed.
- What to do then?



# Methodology

How we addressed the problem.

1. Service Status Scraping
  2. Notification System and Data Structure Used
  3. Web Interface
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# Service Status Scraping

Getting the Data


- Initial Format: XML and HTML files
  - We transform it
  - Keep lines with altered service in dictionary and as a list
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# Notification System and Data Structure

Using the Data and build the  
notifications

- Keep the data: DataFrame
  - 13 rows, with all the information we need
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# How the DataFrame looks like



	0	....	n
User's name	someone@nyu.edu	....	someone.else@nyu
Commuting time	11:30	....	12:45
Lines ACE	1	....	0
.....	bits	....	...
Line S	0	....	1

# How we notify the users

Before starting, set the `time_window` variable

1. For loop on all columns
2. If `commuting_time-present_time==time_window`
  - a. Check if the user is taking one of the delayed lines (`logical_and`)
  - b. If he is, add his email to the mailing list
3. Send emails with the `emailTrigger` function
4. Re-do the same process every minute

# Web Interface

Coding the User's experience

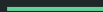
- CherryPy library
  - Storing the user's input in a dictionary on the local server
  - Methods to use this dictionary in the main code
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# Results

What the users get

- Website
- Notifications



# The website's design



MTA Notification

## Sign up

Enter your email address here:

When do you take MTA? Enter time in 24hr format:

Please select all the possible lines you take:

- ☐ 1,2,3
- ☐ 4,5,6
- ☐ 7
- ☐ A,C,E
- ☐ B,D,F,M
- ☐ G
- ☐ J,Z
- ☐ L
- ☐ N,Q,R
- ☐ S
- ☐ S,I,R

# An example of notification

ALERT: Service Change on line(s) 123, 456, 7, ACE, BDFM, NQR, S and SIR Inbox x



notificationmta@gmail.com

to me ▾

Dear user,

Please be aware of the following service changes that might affect your commute:

Lines 123

Status: Planned Work

TRACK & TRACK PLATE INSTALLATION, REPLACEMENT OF POWER & COMMUNICATION CABLES[2] [3] Trains run at reduced speed through the Clark St Tunnel between Manhattan and Brooklyn

Lines 456

Status: Planned Work

ELECTRICAL IMPROVEMENTS[6D] Brooklyn Bridge-bound trains run local from Parkchester to 3 Av-138 St

ELECTRICAL IMPROVEMENTS[6] The last stop for alternate trains headed toward Pelham Bay Park is 3 Av-138 St

ELECTRICAL IMPROVEMENTS[6] Pelham Bay Park-bound trains run express from 3 Av-138 St to Pelham Bay Park

TRACK REPLACEMENT[4] Woodlawn-bound trains skip 161 St, 167 St, 170 St, Mt Eden Av and 176 St

Lines 7

Status: Planned Work

ELECTRICAL IMPROVEMENTS[7] Flushing-bound trains skip 33, 40, 46, 52, 69, 74, 82, 90, 103 and 111 Sts

Lines ACE

Status: Delayed

[E], [F] and [M] train service has resumed following an earlier incident of a customer struck by a train at 50 St

Lines BDFM

Status: Delayed

[E], [F] and [M] train service has resumed following an earlier incident of a customer struck by a train at 50 St

Lines NQR

Status: Planned Work

TRACK MAINTENANCE[W] No trains between 57 St-7 Av and Ditmars Blvd - Take the [N] instead[W] trains run every 20 minutes in Manhattan

TRACK MAINTENANCE[N] Astoria-bound trains skip 39 Av and Broadway

Lines S

Status: Planned Work

TRACK REPLACEMENT[A] Trains replace the [S] Rockaway Park Shuttle

Lines SIR

Status: Planned Work

SCHEDULED MAINTENANCE[SIR] Trains board at the St. George-bound platform from Grant City to Great Kills

Thanks for using our platform,

The subway helper team

# Thank you

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