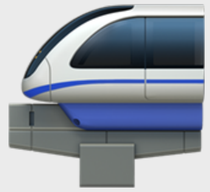
is my train fucked .com

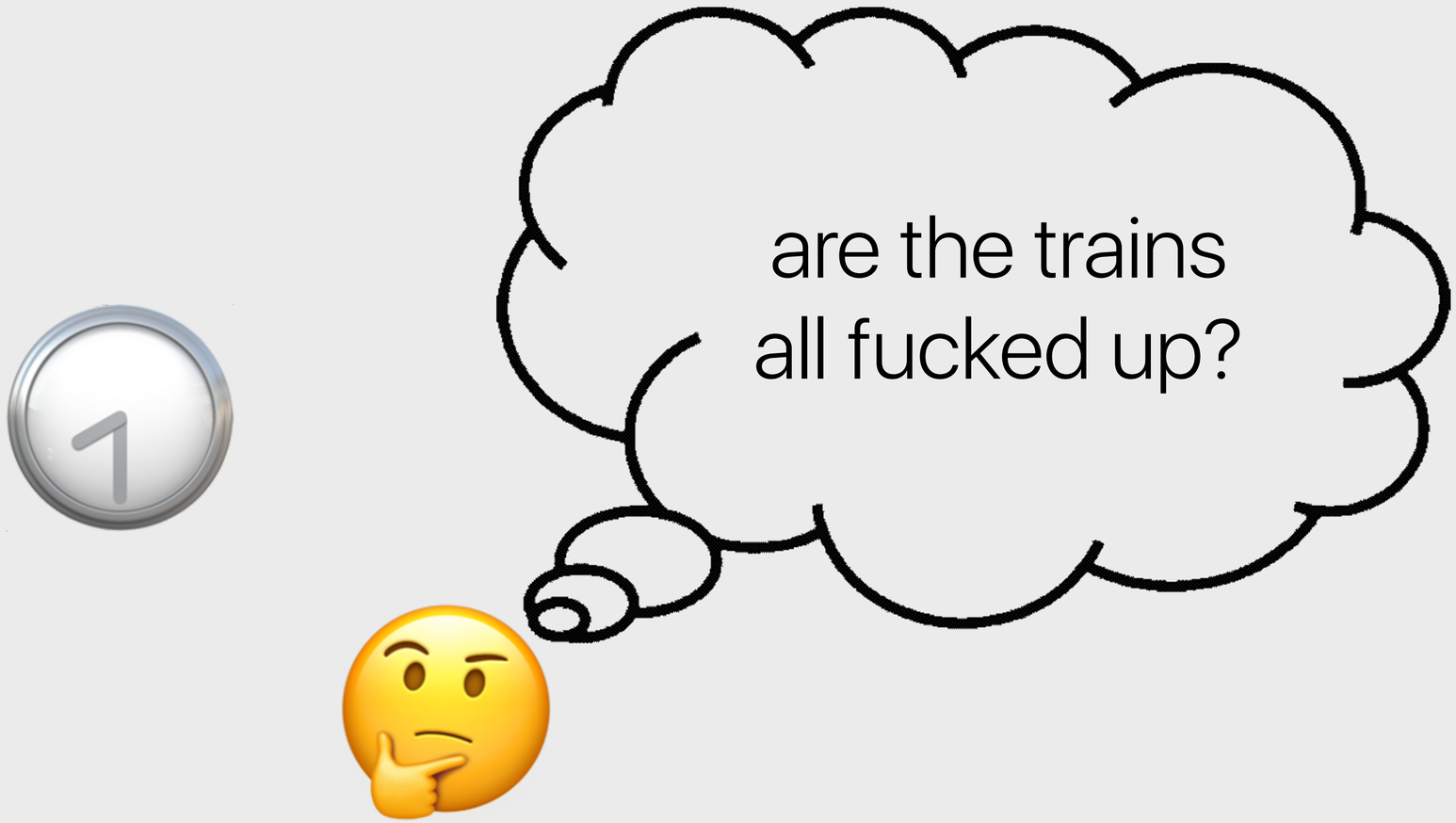
Chris Becker
Hack && Tell 38

Special requests? (do you need audio, a place to hang a green screen, or..?)

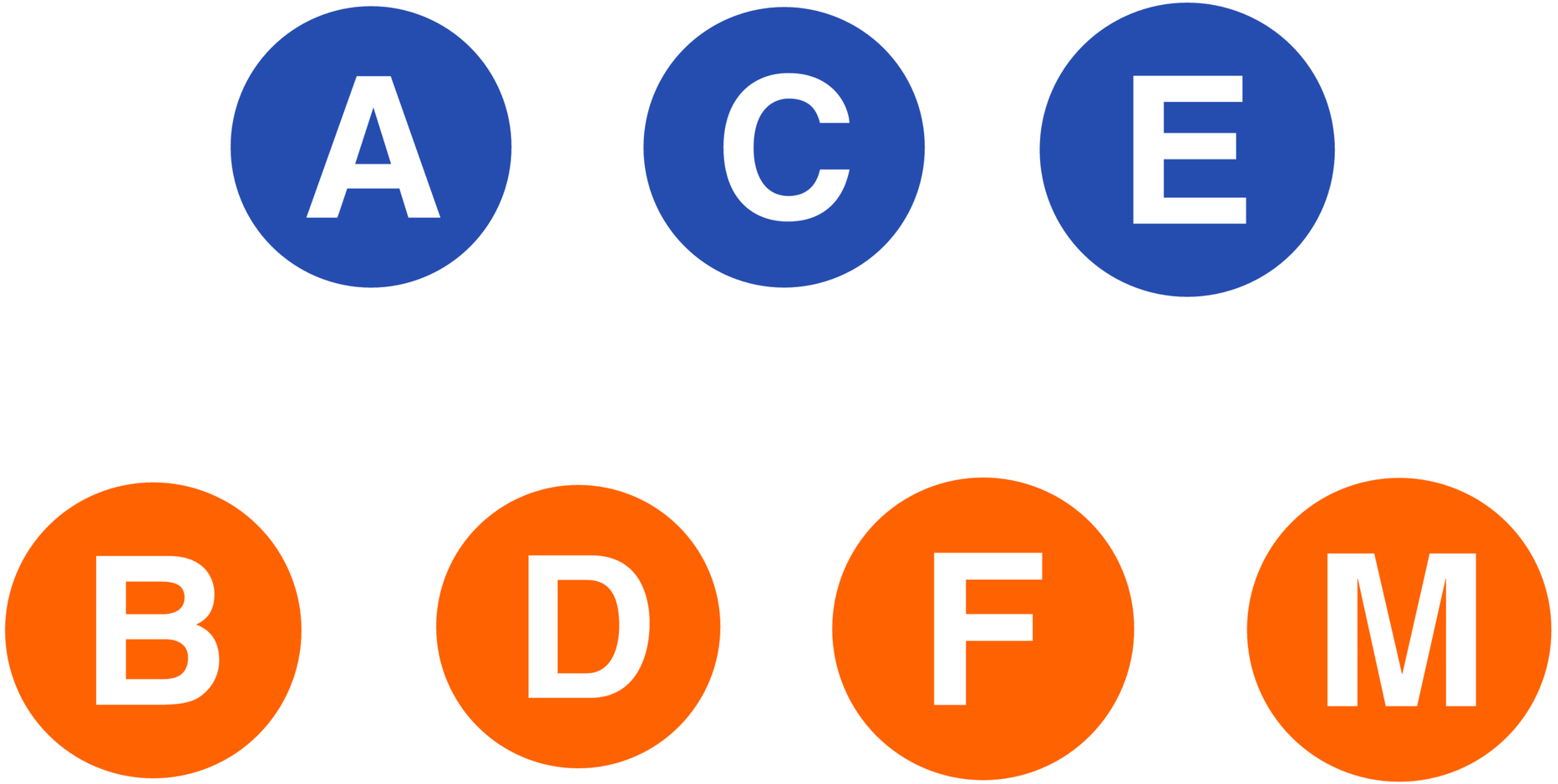
Only that I can say the word "fuck" a lot 😳

← me




are the trains
all fucked up?

th Ferry
th Ferry
Daily
Daily

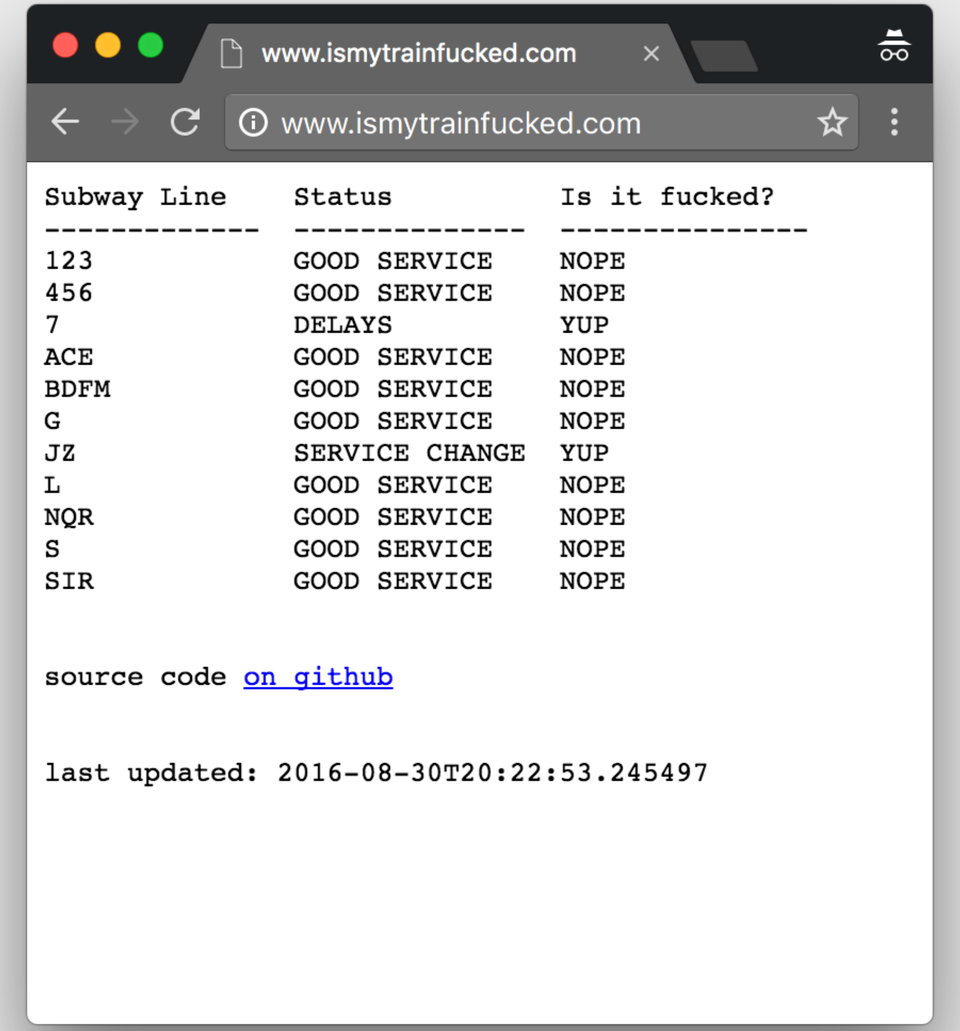

A
C
E
B
D
F
M

A C E	Delays
B D F M	Delays

●○○○○ Verizon 1x

19 requests | 36.6 KB transferred | Finish: 660 ms | DOMContentLoaded: 594 ms | Load: 669 ms

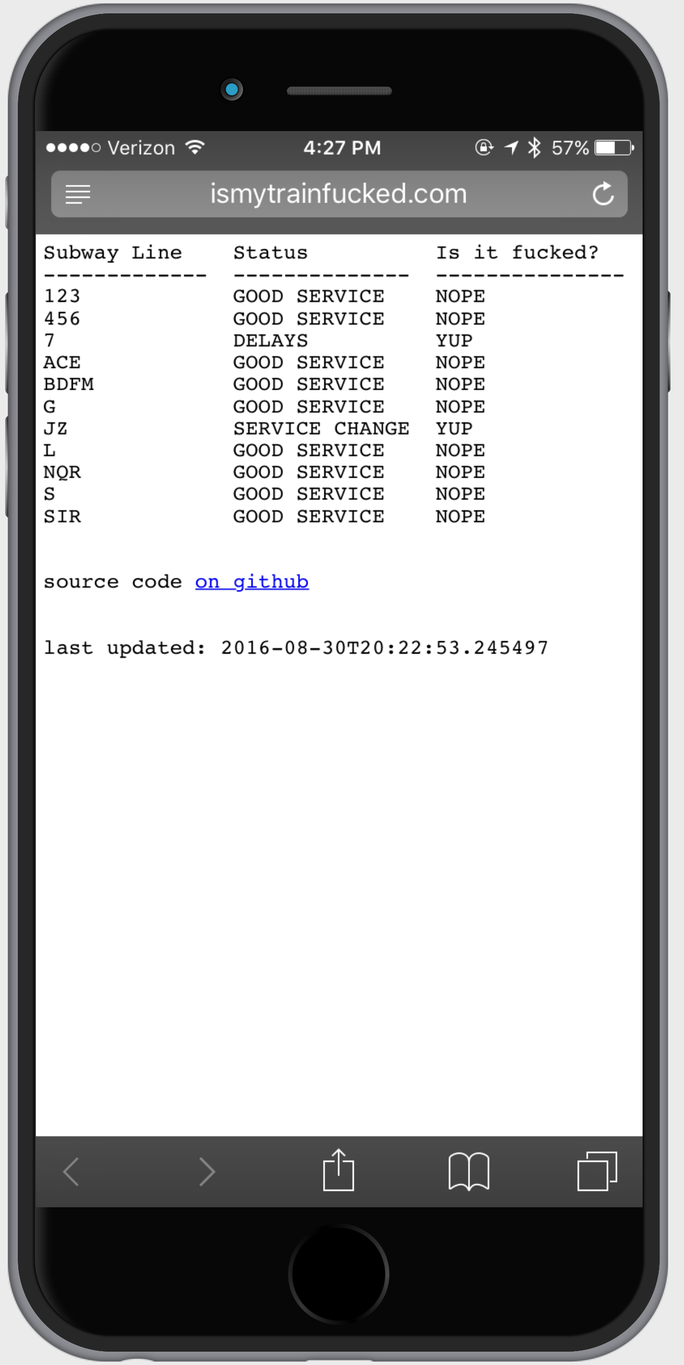
so I built a tiny app!



Subway Line	Status	Is it fucked?
123	GOOD SERVICE	NOPE
456	GOOD SERVICE	NOPE
7	DELAYS	YUP
ACE	GOOD SERVICE	NOPE
BDFM	GOOD SERVICE	NOPE
G	GOOD SERVICE	NOPE
JZ	SERVICE CHANGE	YUP
L	GOOD SERVICE	NOPE
NQR	GOOD SERVICE	NOPE
S	GOOD SERVICE	NOPE
SIR	GOOD SERVICE	NOPE

source code on github

last updated: 2016-08-30T20:22:53.245497



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architecture

- AWS Lambda microservice
- scrapes MTA data every 5 minutes, loads JSON blob into DynamoDB
- DynamoDB INSERT trigger runs Lambda function to write latest data to S3 bucket
- S3 bucket serves HTML file

two λ functions

- scrape MTA data, update database
- build website HTML and upload to S3

scrape MTA site

```
def handle(event, context):
    data = []
    r = requests.get('http://web.mta.info/status/serviceStatus.txt')
    soup = Soup(r.text, "html.parser")
    for subway in soup.findAll("subway"):
        for status in subway.findAll("line"):
            line = (status.contents[1].contents[0])
            status = (status.contents[3].contents[0])
            if status != "GOOD SERVICE":
                is_it_fucked = "YUP"
            else:
                is_it_fucked = "NOPE"
            data.append([line, status, is_it_fucked])
```

```
dynamo = boto3.resource('dynamodb')
    table = dynamo.Table('ismytrainfucked')
    status = {
        "date": datetime.datetime.strftime(datetime.datetime.now(),
                                           "%Y-%m-%d"),
        "time": decimal.Decimal(time.time()),
        "data": data,
    }

table.put_item(Item=status)
```

build and update website

```
HTML = '''
<html>
<body>
<pre>
{0}
<br />
source code <a href="https://github.com/Cbeck527/is-my-train-
fucked">on github</a>
</pre>
</body>
</html>
'''
```

```
def handle(event, context):
    data = event['Records'][0]['dynamodb']['NewImage']['data']['L']

    status = [
        [item['L'][0]['S'], item['L'][1]['S'], item[‘L'][2]['S']]
        for item in data
    ]
    table = tabulate(status, headers=["Subway Line", "Status", "Is it fucked?"])

    s3 = boto3.resource('s3')
    s3.Object('www.ismytrainfucked.com', 'index.html').put(
        Body=HTML.format(table), ContentType="text/html"
    )
```

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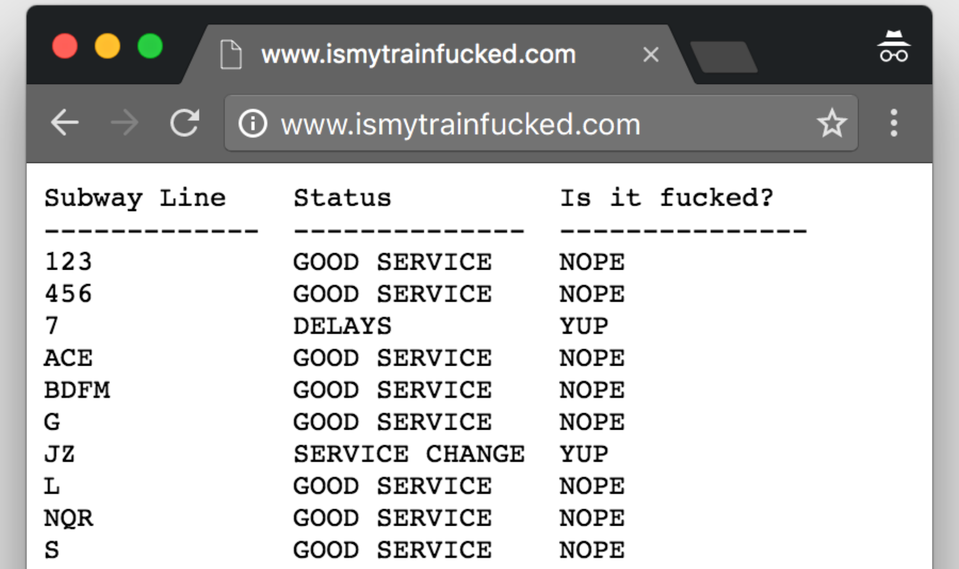
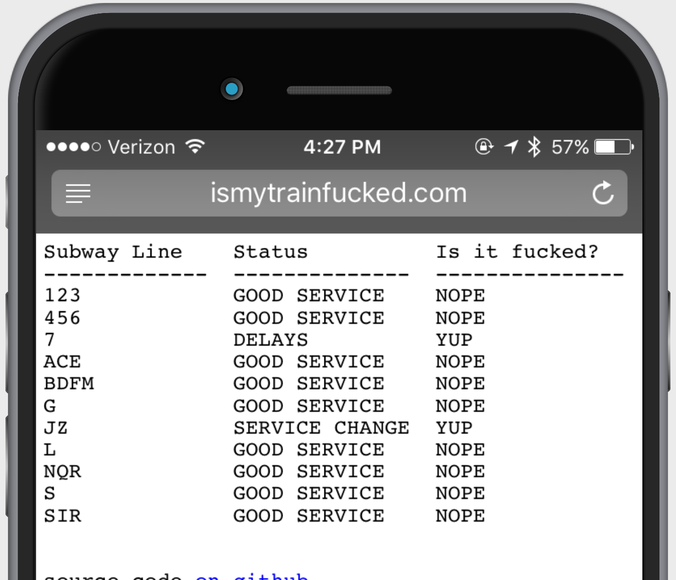




how can IMTF help you?

- figure out train status in low signal area
- plan alternate routes during train fuckery
- giggle because you get to think about bad words

what next?

i’m collecting data!

ismytrainfucked Close

Overview | Items | Metrics | Alarms | Capacity | Indexes | Triggers | Access control

Create item | Actions

Scan: [Table] ismytrainfucked: date, time

Viewing 1 to 100 items

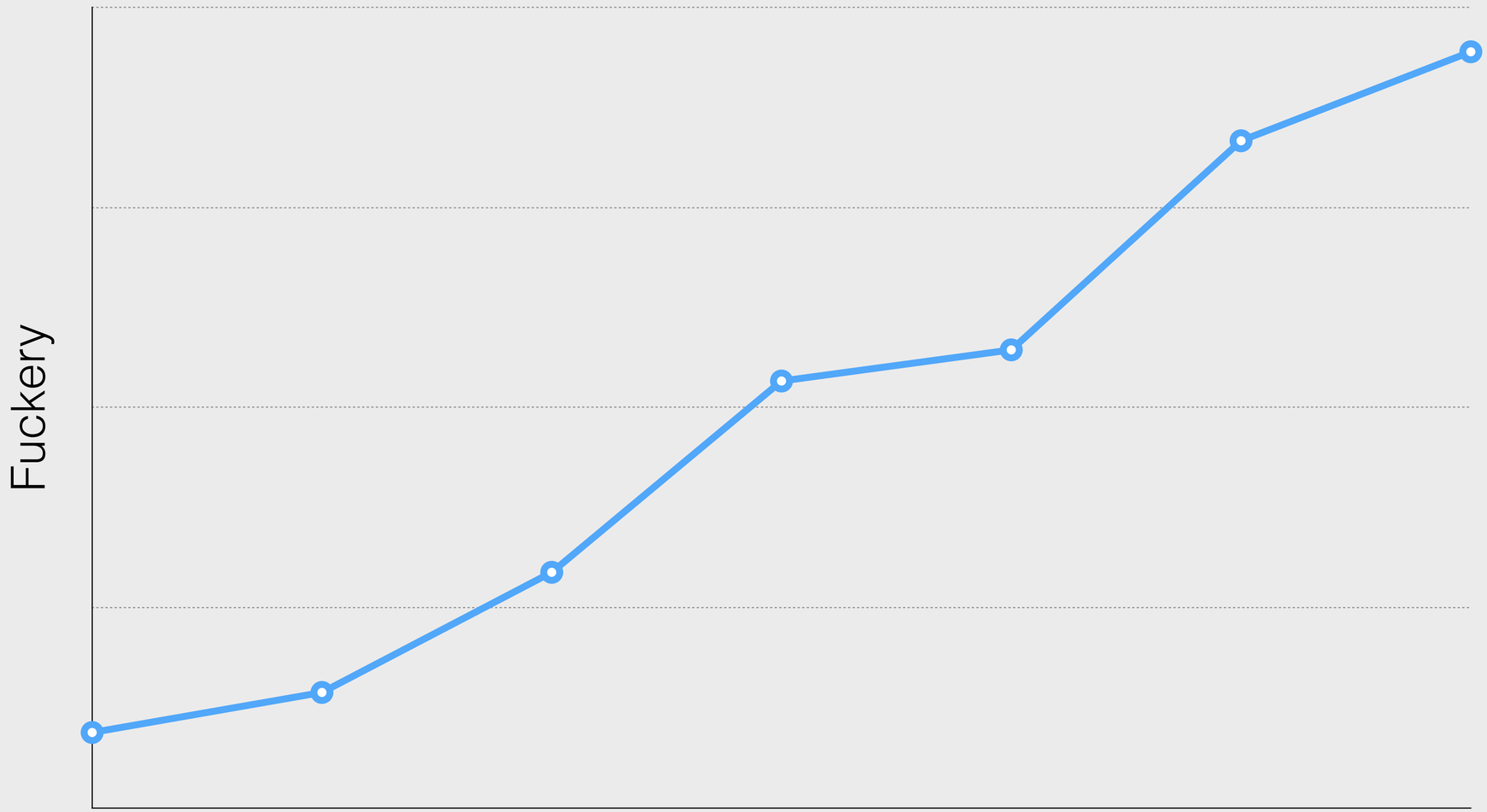
Scan | [Table] ismytrainfucked: date, time

Add filter

Start search

date	time	data
2016-08-24	1471996971....	[{ "L" : [{ "S" : "123" }, { "S" : "GOOD SERVICE" }, { "S" : "NOPE" }] }, { "L" : [{ "S" : "456" }, { "S" : "DELAYS" }, { "S"...
2016-08-24	1471997272....	[{ "L" : [{ "S" : "123" }, { "S" : "GOOD SERVICE" }, { "S" : "NOPE" }] }, { "L" : [{ "S" : "456" }, { "S" : "GOOD SERVICE...
2016-08-24	1471997571....	[{ "L" : [{ "S" : "123" }, { "S" : "GOOD SERVICE" }, { "S" : "NOPE" }] }, { "L" : [{ "S" : "456" }, { "S" : "GOOD SERVICE...
2016-08-24	1471997870....	[{ "L" : [{ "S" : "123" }, { "S" : "GOOD SERVICE" }, { "S" : "NOPE" }] }, { "L" : [{ "S" : "456" }, { "S" : "GOOD SERVICE...
2016-08-24	1471998171....	[{ "L" : [{ "S" : "123" }, { "S" : "SERVICE CHANGE" }, { "S" : "YUP" }] }, { "L" : [{ "S" : "456" }, { "S" : "GOOD SERVIC...
2016-08-24	1471998470....	[{ "L" : [{ "S" : "123" }, { "S" : "SERVICE CHANGE" }, { "S" : "YUP" }] }, { "L" : [{ "S" : "456" }, { "S" : "GOOD SERVIC...
2016-08-24	1471998771....	[{ "L" : [{ "S" : "123" }, { "S" : "SERVICE CHANGE" }, { "S" : "YUP" }] }, { "L" : [{ "S" : "456" }, { "S" : "GOOD SERVIC...
2016-08-24	1471999071....	[{ "L" : [{ "S" : "123" }, { "S" : "SERVICE CHANGE" }, { "S" : "YUP" }] }, { "L" : [{ "S" : "456" }, { "S" : "GOOD SERVIC...

Train Fuckery Over Time*

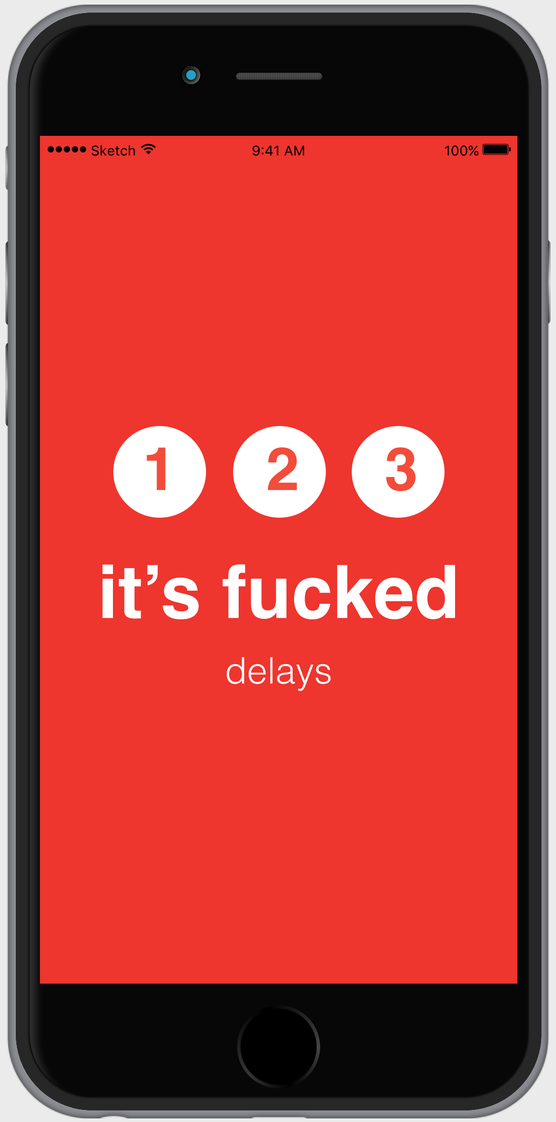


* not actual data

maybe an API!

```
$ curl http://ismytrainfucked.com/api/v1/123/status
{
  “status”: “FUCKED”,
  “reason”: “service change”
}
```

maybe an app!



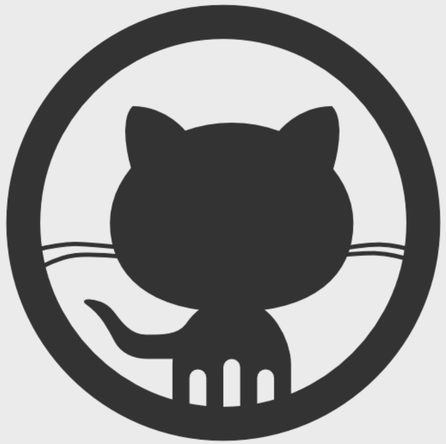
4 5 6

it’s fucked

delays

advantages of serverless service

- literally $0.00 a month
- S3 has theoretically no bandwidth limits
- no operational overhead
- adding features (API, etc) pushes you further into a vendor lock-in scenario



Cbeck527 / is-my-train-fucked

“If you don’t like open-source software,
you’re stupid.”

- Chris Becker, 2016

thanks!

questions?