

Singapore

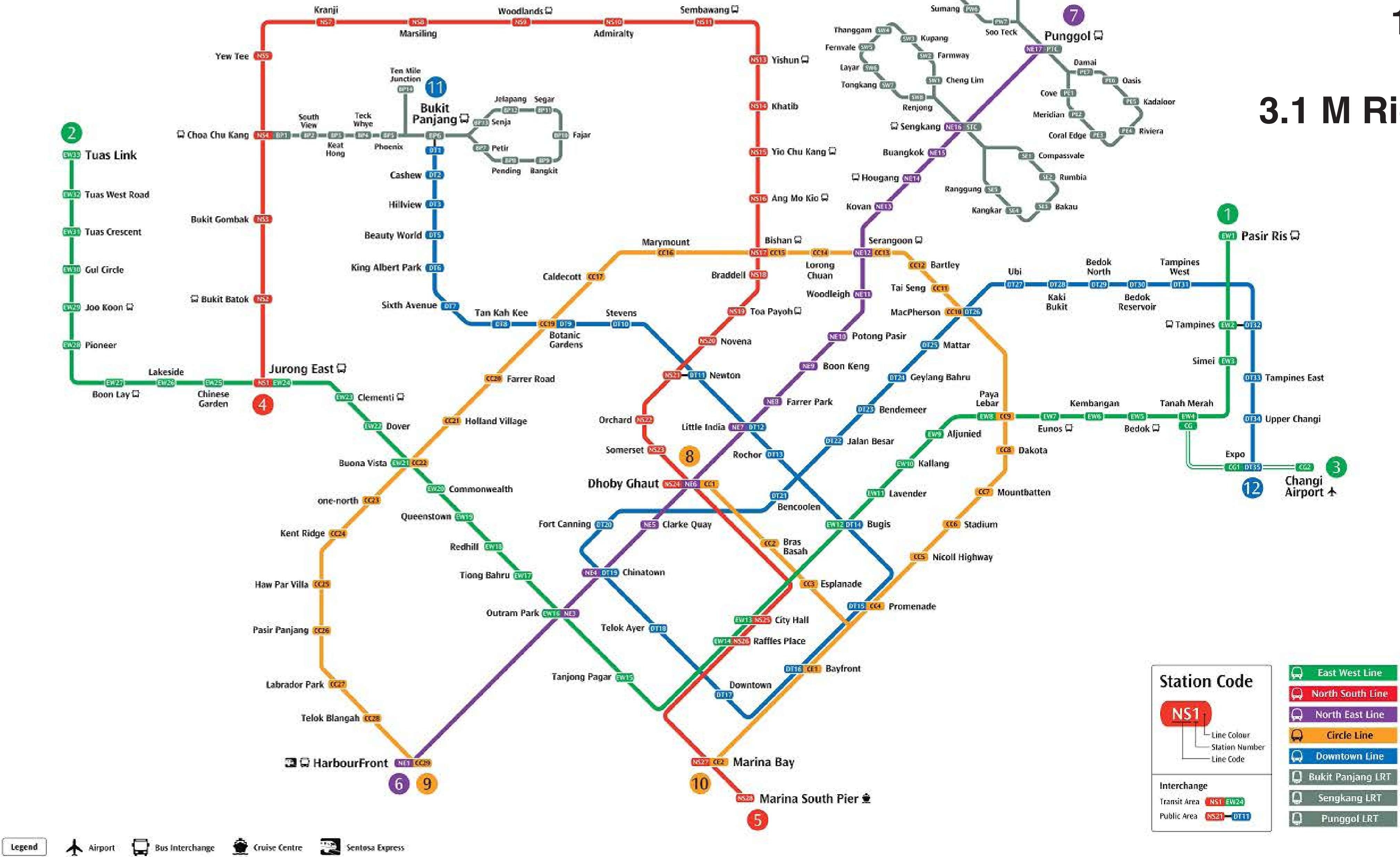




Singapore Mass Rapid Transit

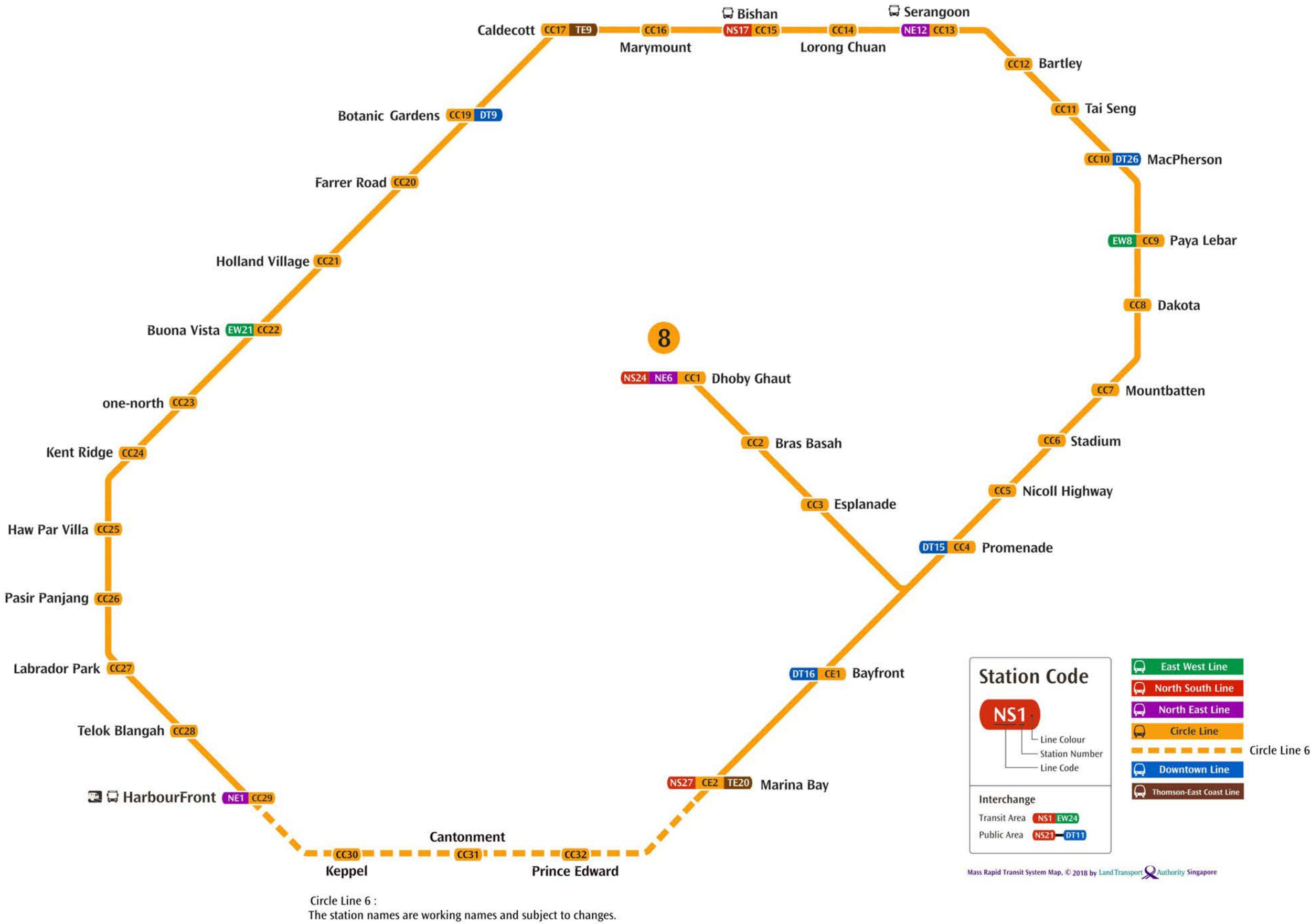
Singapore Mass Rapid Transit System

Opened: 1987
176 Stations
124 Miles
5 Lines
3.1 M Riders/Day



Singapore Mass Rapid Transit System Circle Line

Opened: 2009
30 Stations
22.1 Miles



Aug - Oct 2016: Train Breakdowns

Signal fault slows down Circle Line for the 5th day running



PUBLISHED SEP 2, 2016, 7:19 AM SGT | UPDATED SEP 2, 2016, 6:05 PM



Annabeth Leow Samantha Boh

SINGAPORE - Morning rush hour on the Circle Line was marked by delays for the fifth straight day on Friday (Sept 2), as rail operator SMRT's unresolved signalling fault continues to plague train service.

SMRT tweeted at 6.13am that commuters should expect longer journeys on the line due to the "intermittent signalling issue" that was first reported on Monday.

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SUNDAY 07 OCTOBER 2018

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8 DAYS

Mysterious signal fault returns to cause disruption on Circle Line

The crowds at Bishan station on the Circle Line. Photo: shark_kul/Twitter

Published 01 NOVEMBER, 2016 | UPDATED 02 NOVEMBER, 2016

860 Shares

SINGAPORE — A mysterious signal fault on the Circle Line has returned to frustrate commuters, with travel times delayed by at least half an hour during the morning rush hour on Wednesday (Nov 2).

The CCL last saw a signal fault on Aug 29, when commuters were hit five days in a row with delays that SMRT attributed to the signaling fault.

Data.gov.sg

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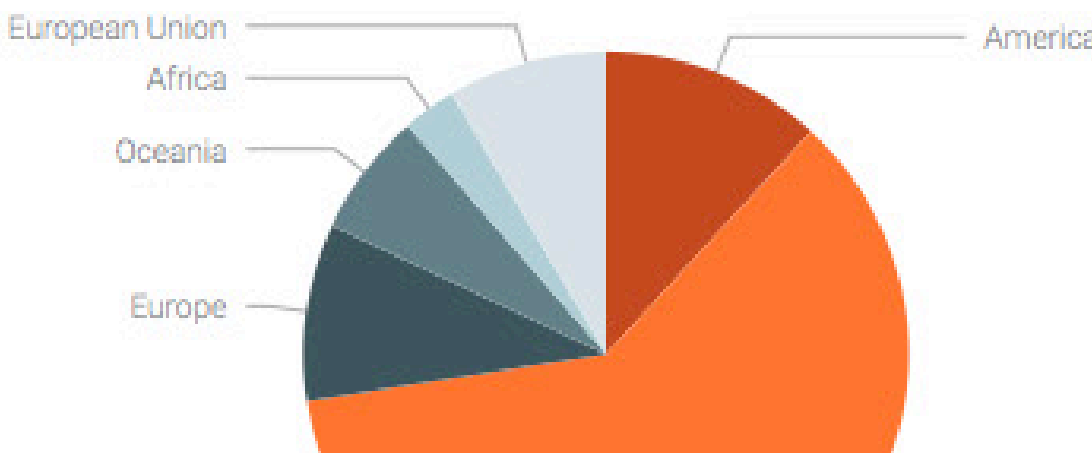
Transport

Singapore at a glance

Singapore Residents By Ethnic Group, End June, Annual (2017)



Domestic Exports By Area (2014)

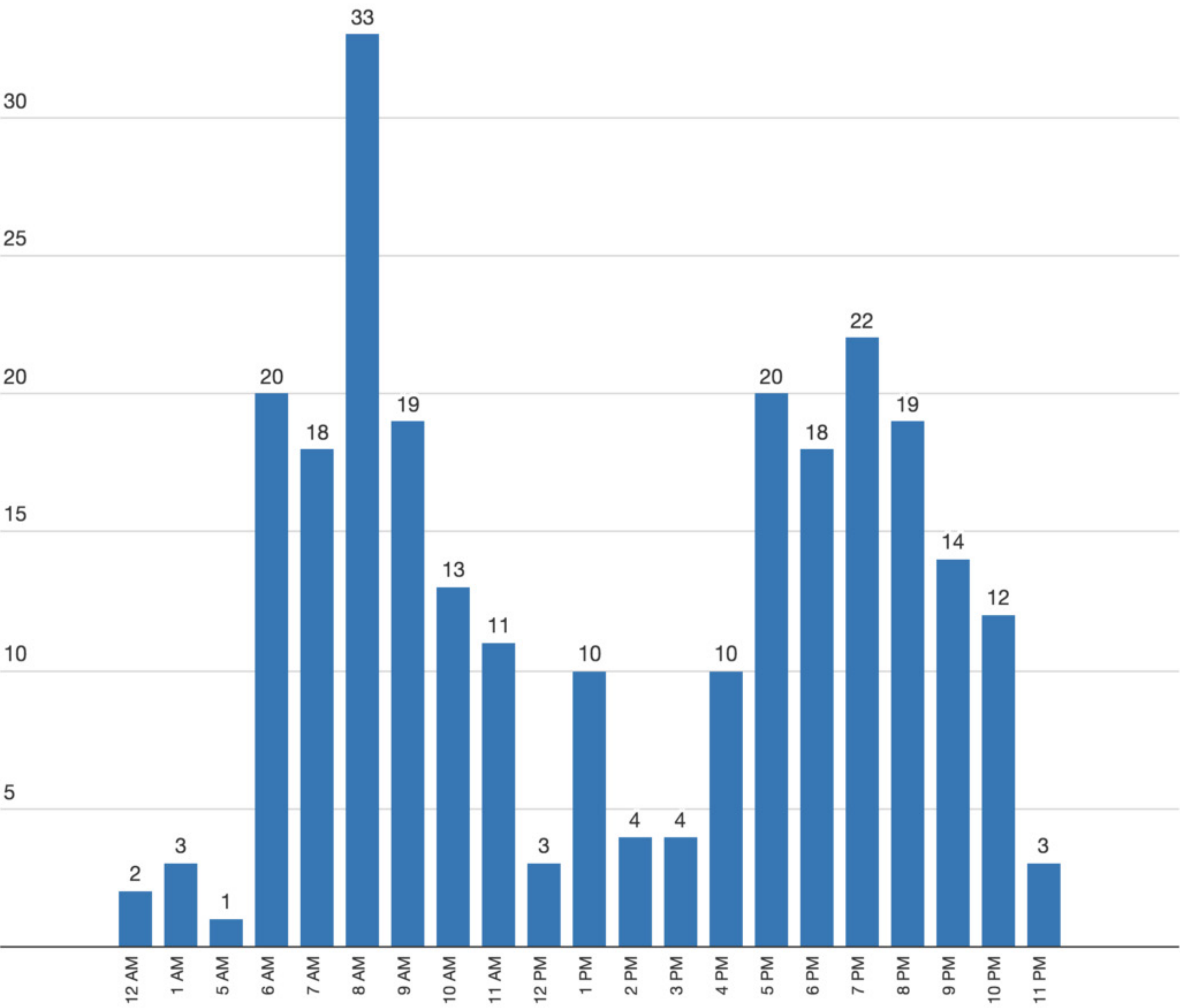


The Data

	S/N	S/N.1	Date	Traffic Date	PV	Time	Bound	Station from	Station to	Event	Remarks	DateTime
0	1	1	2016-08-28	2016-08-28	PV40	19:32:00	OT	KRG	ONH	EB	point track	2016-08-28 19:32:00
1	2	2	2016-08-28	2016-08-28	PV53	19:39:00	OT	LBD	PPJ	EB	point track	2016-08-28 19:39:00
...
257	57	42	2016-11-04	2016-11-04	PV13	22:29:00	IT	SDM	MBT	EB	NaN	2016-11-04 22:29:00
258	58	43	2016-11-05	2016-11-05	PV43	00:07:00	IT	TLB	HBF	EVAC	Withdrawal train, no pax on-board	2016-11-05 00:07:00

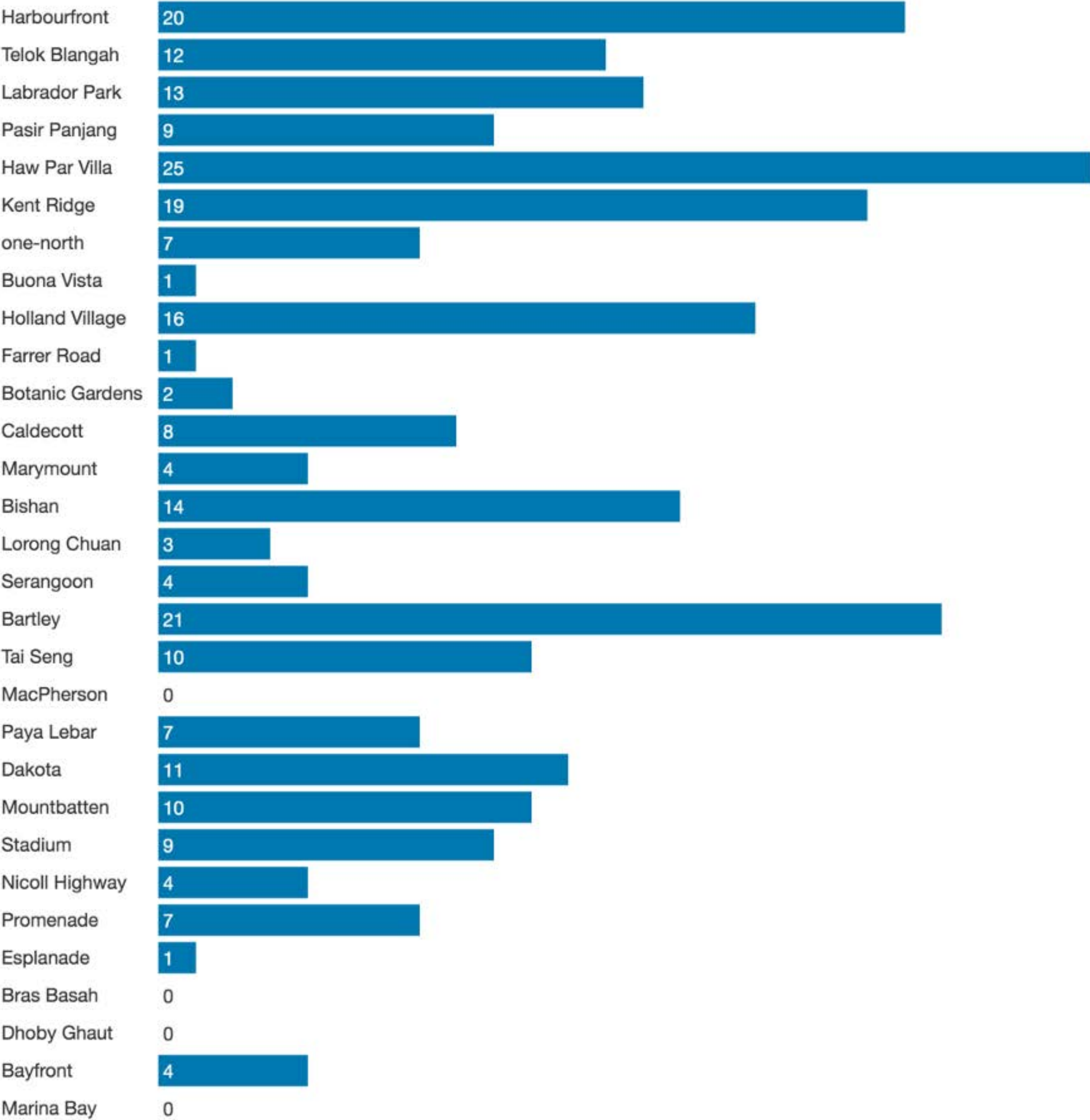
The Data

Frequency by Time of Day



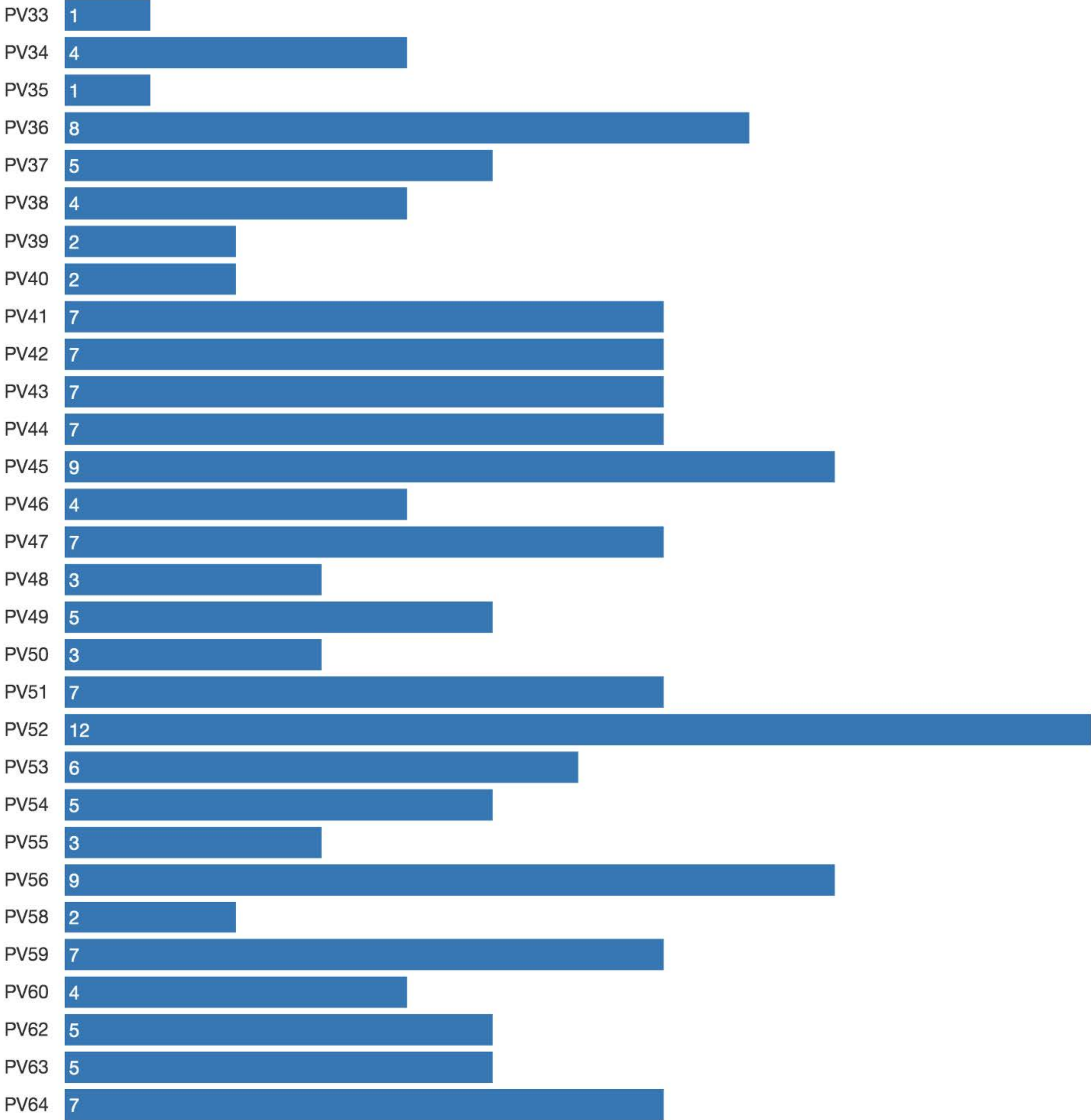
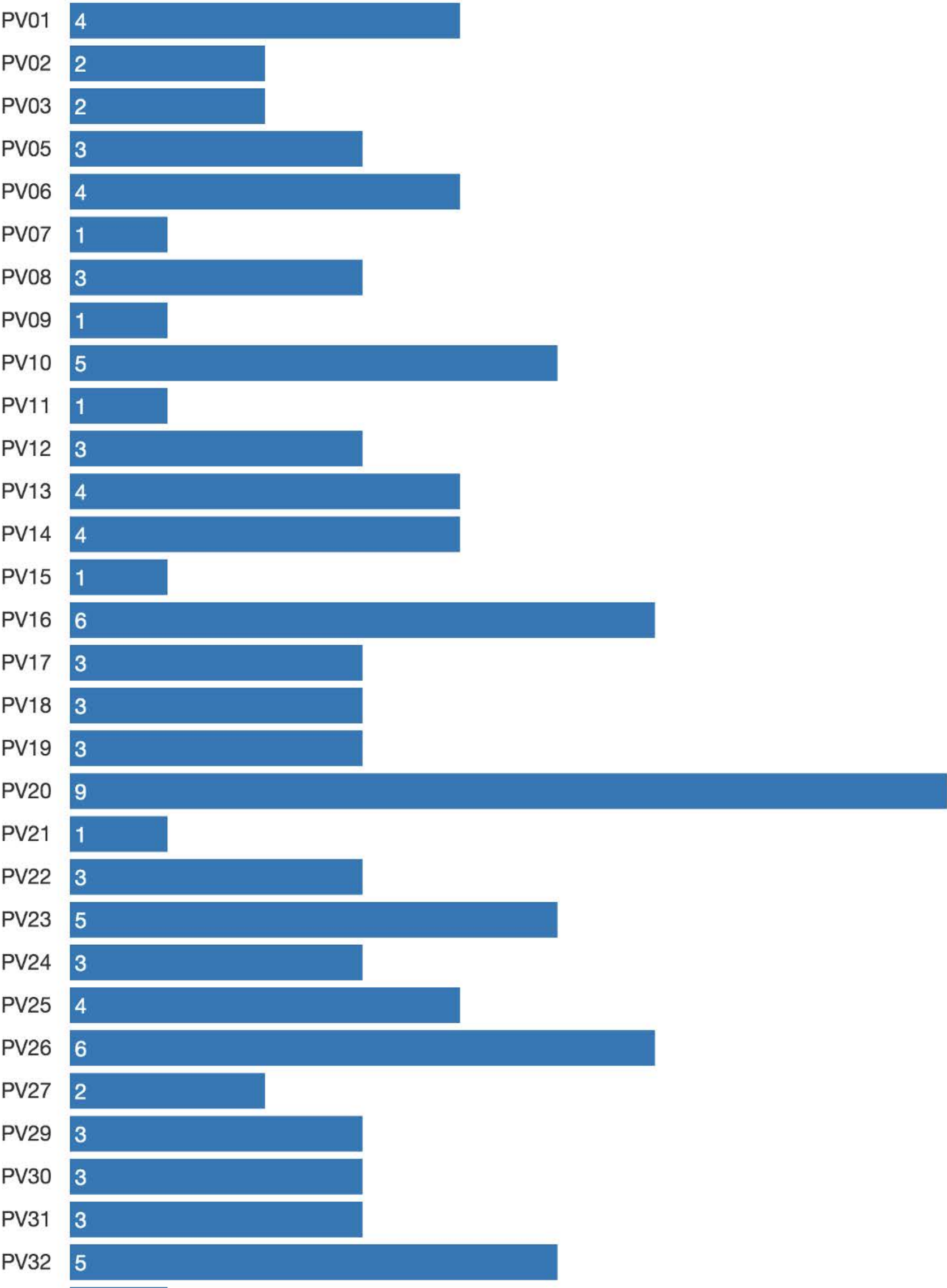
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Frequency by Station

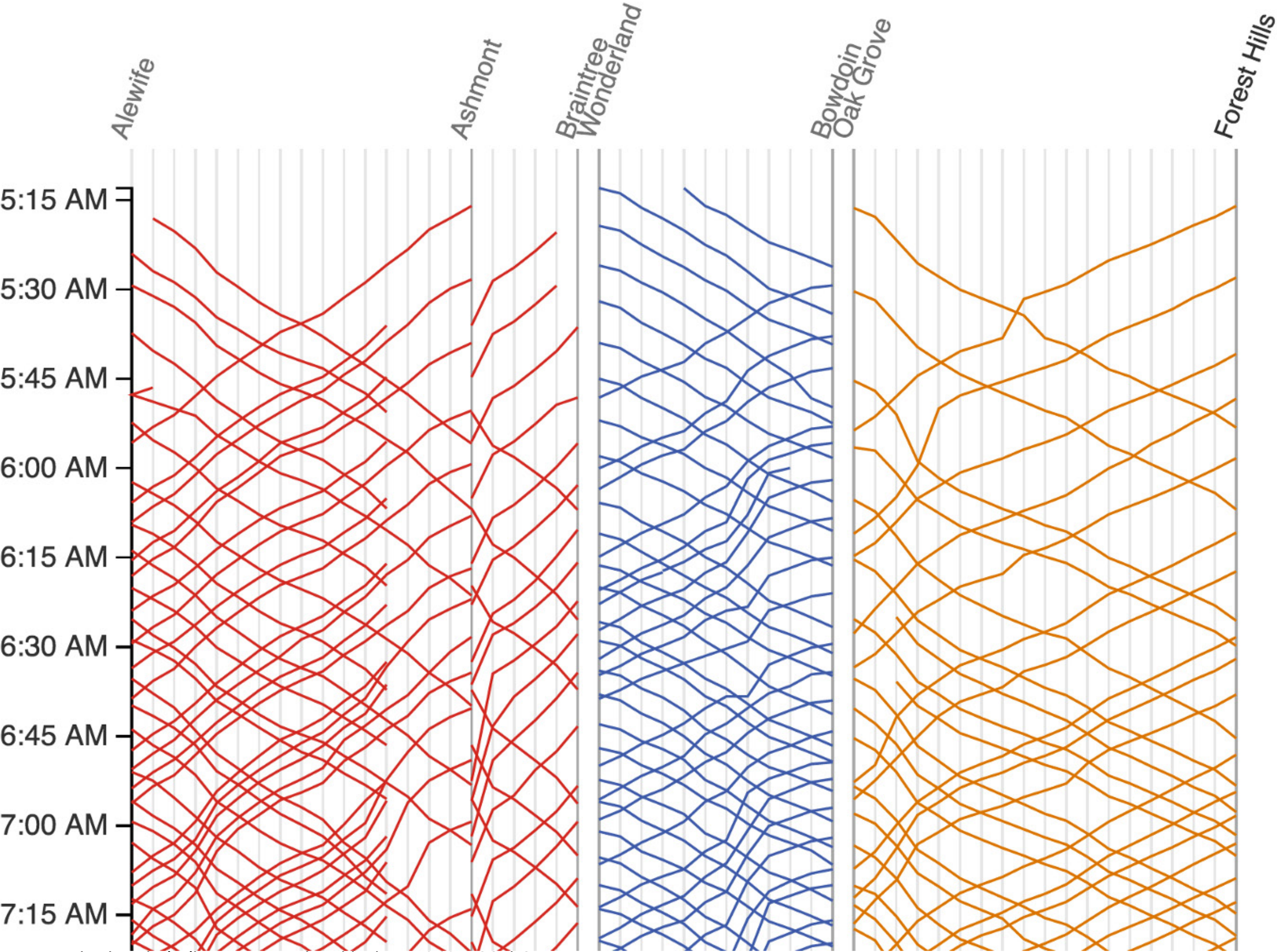


The Data

Frequency by Train ID

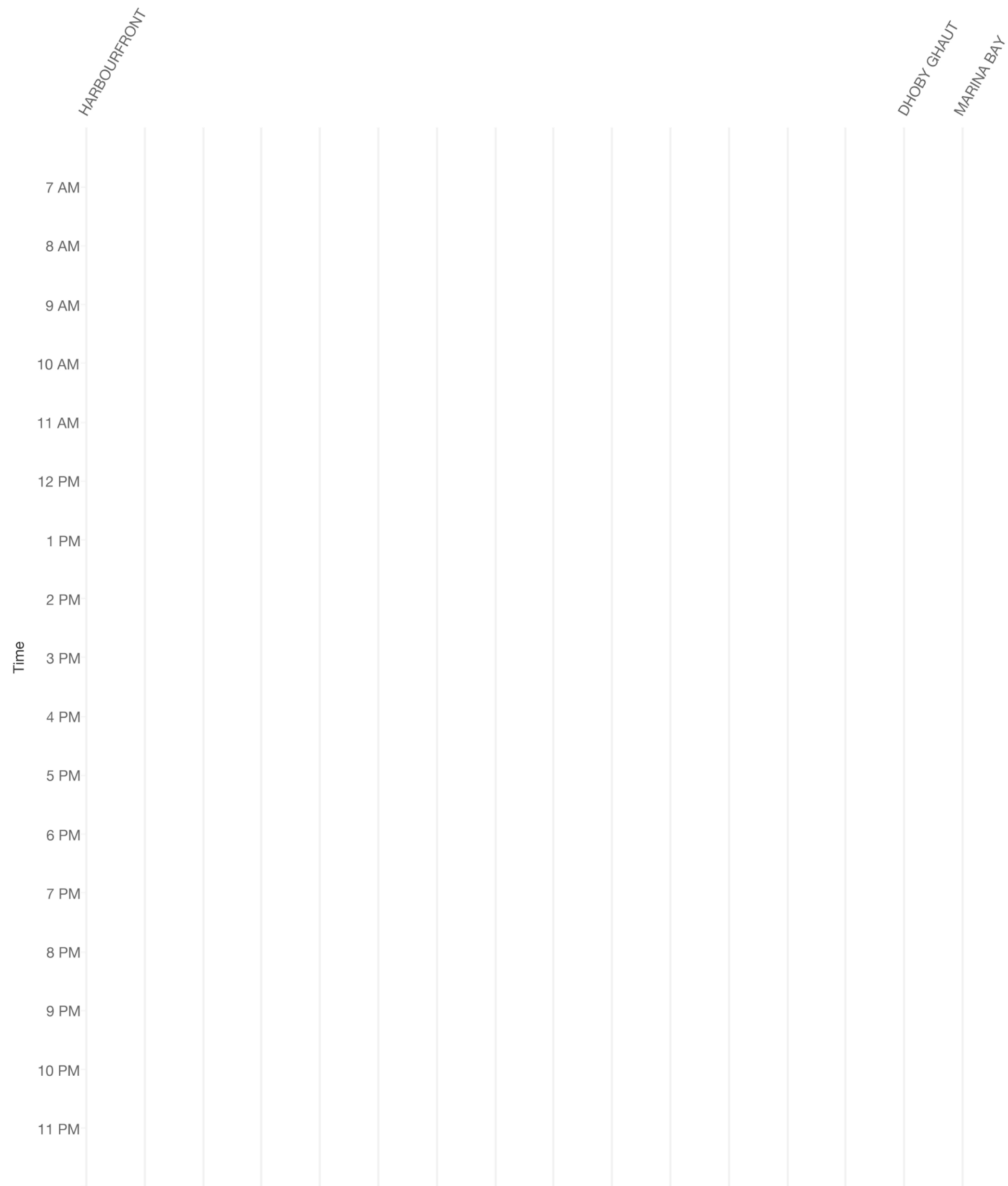


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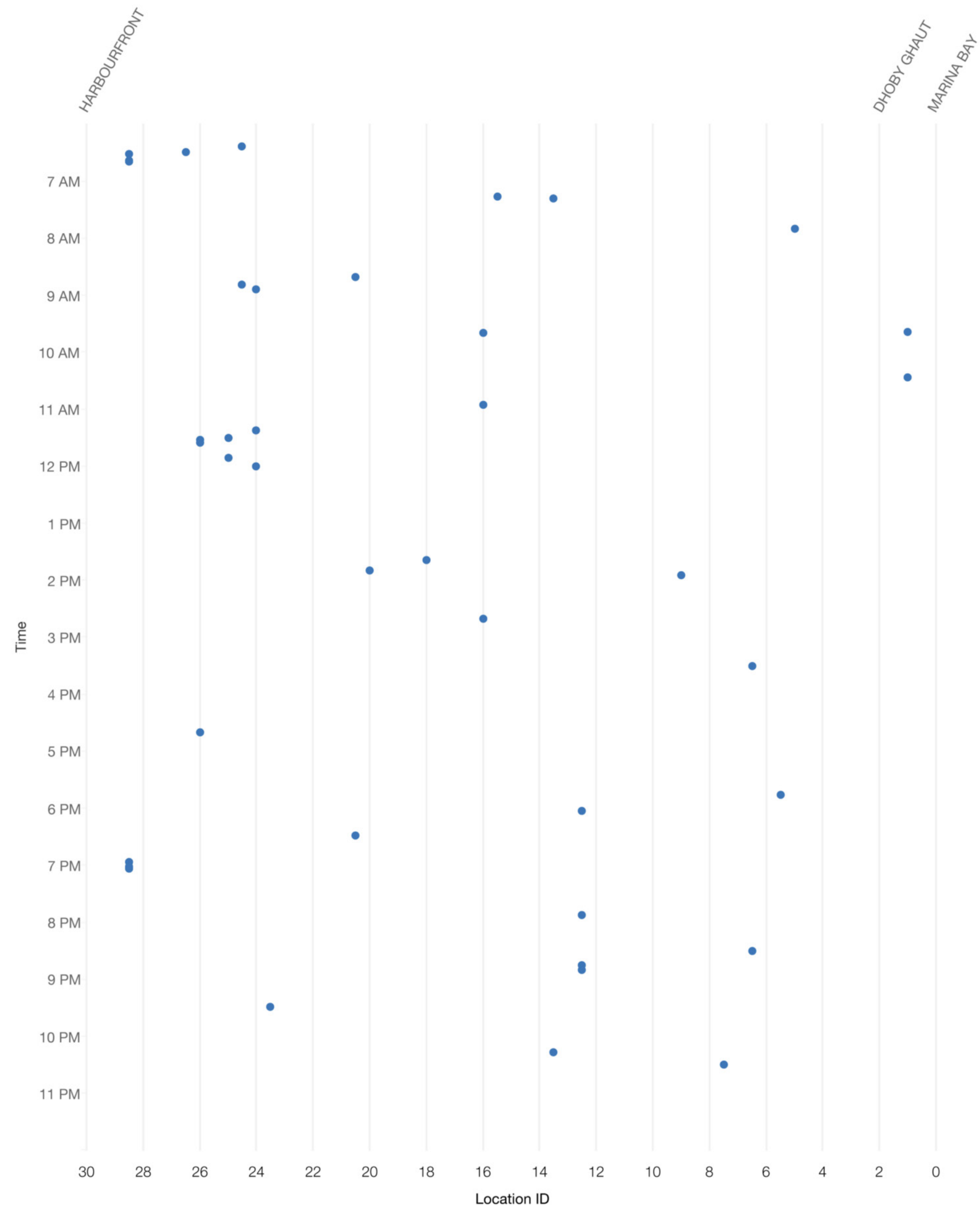


source: blog.data.gov.sg/how-we-caught-the-circle-line-rogue-train-with-data-79405c86ab6a

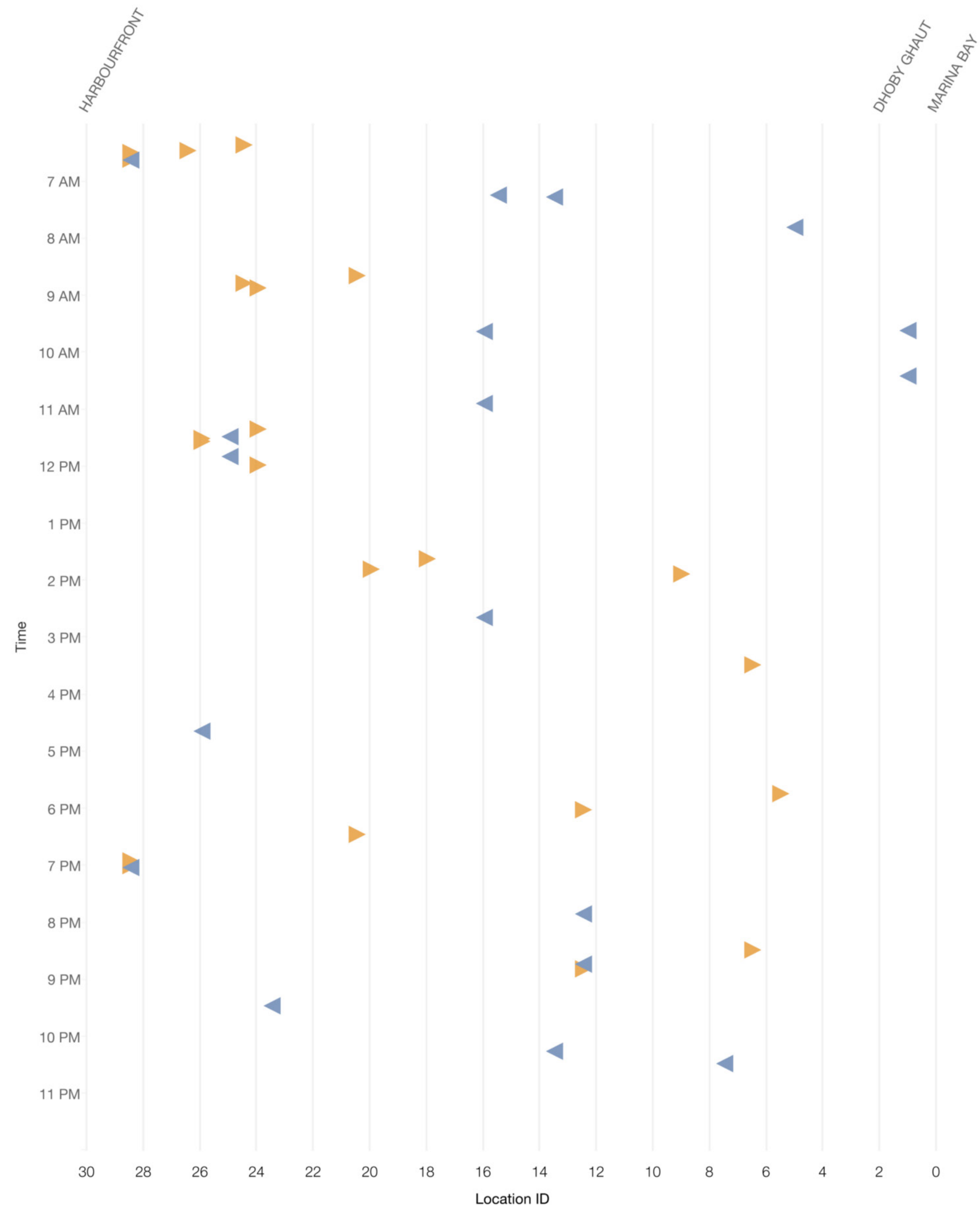
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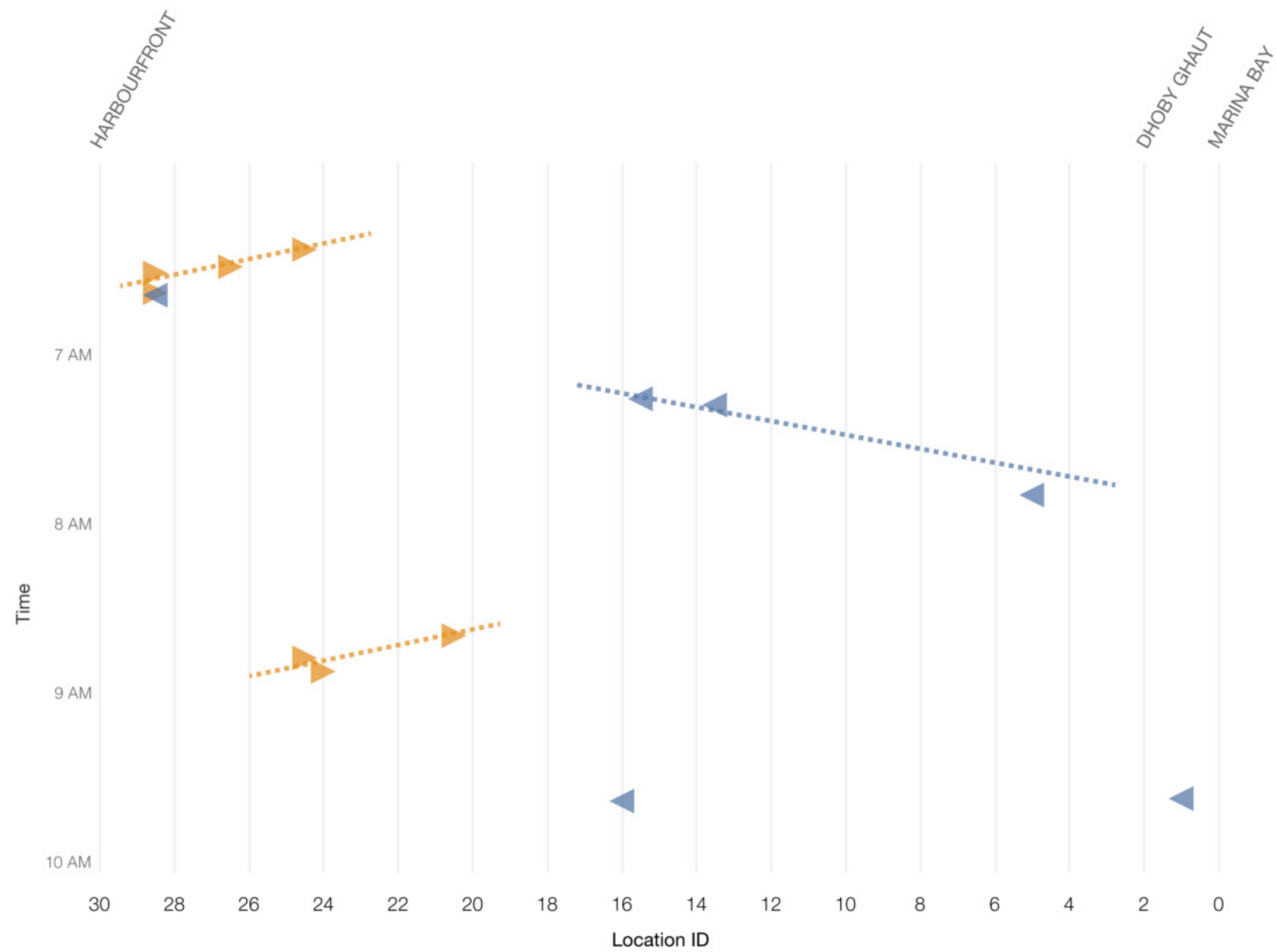
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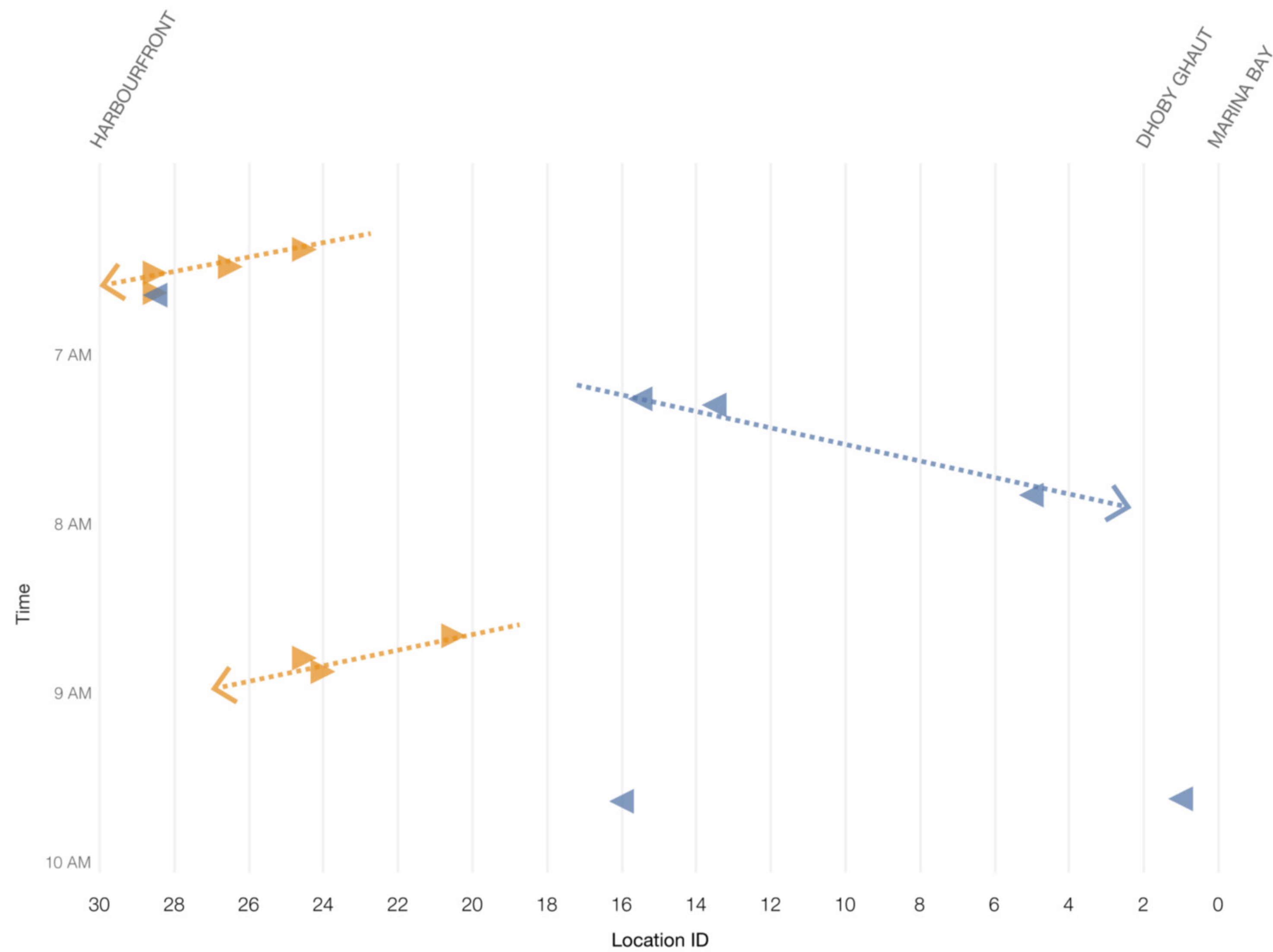
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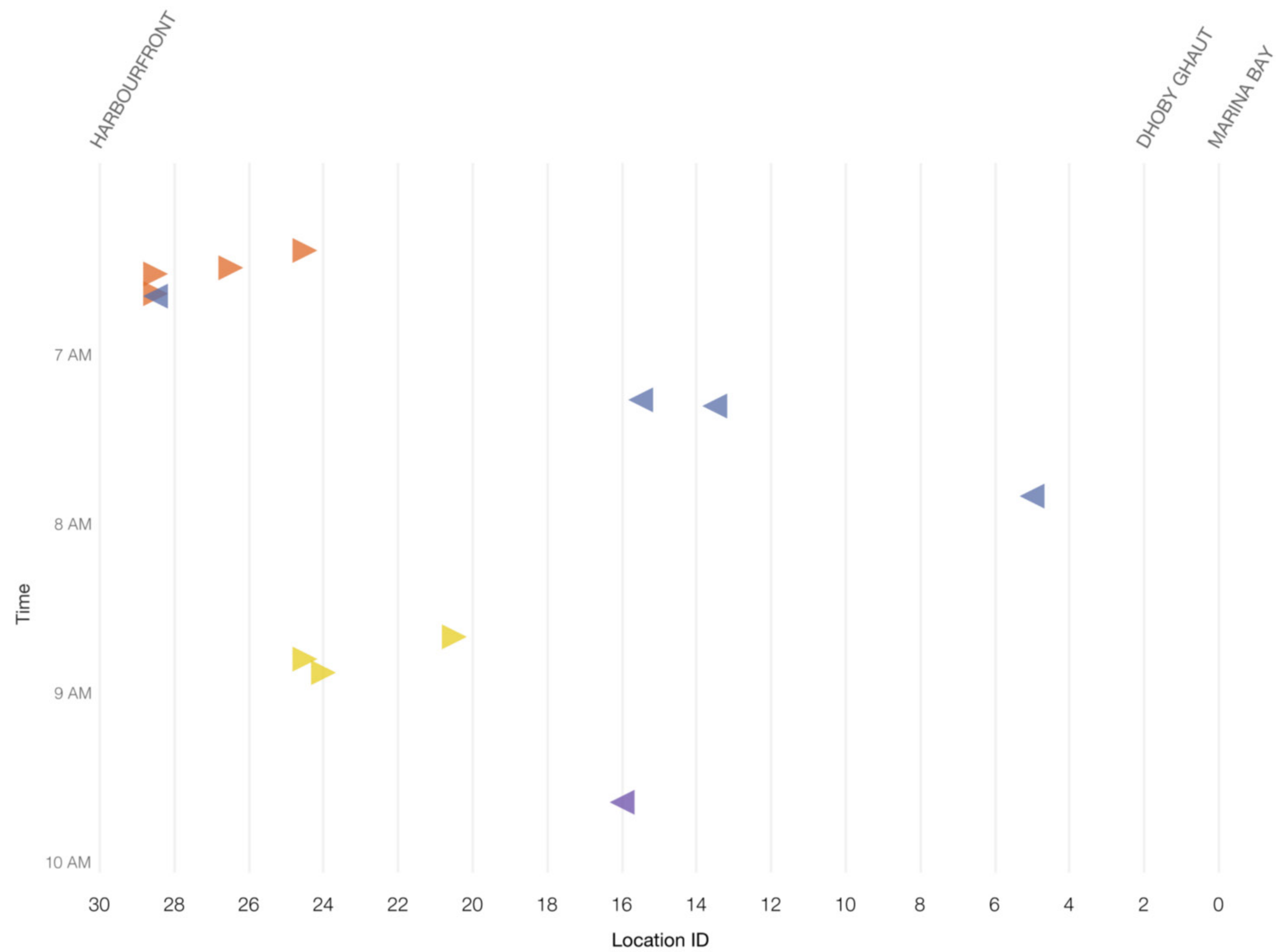
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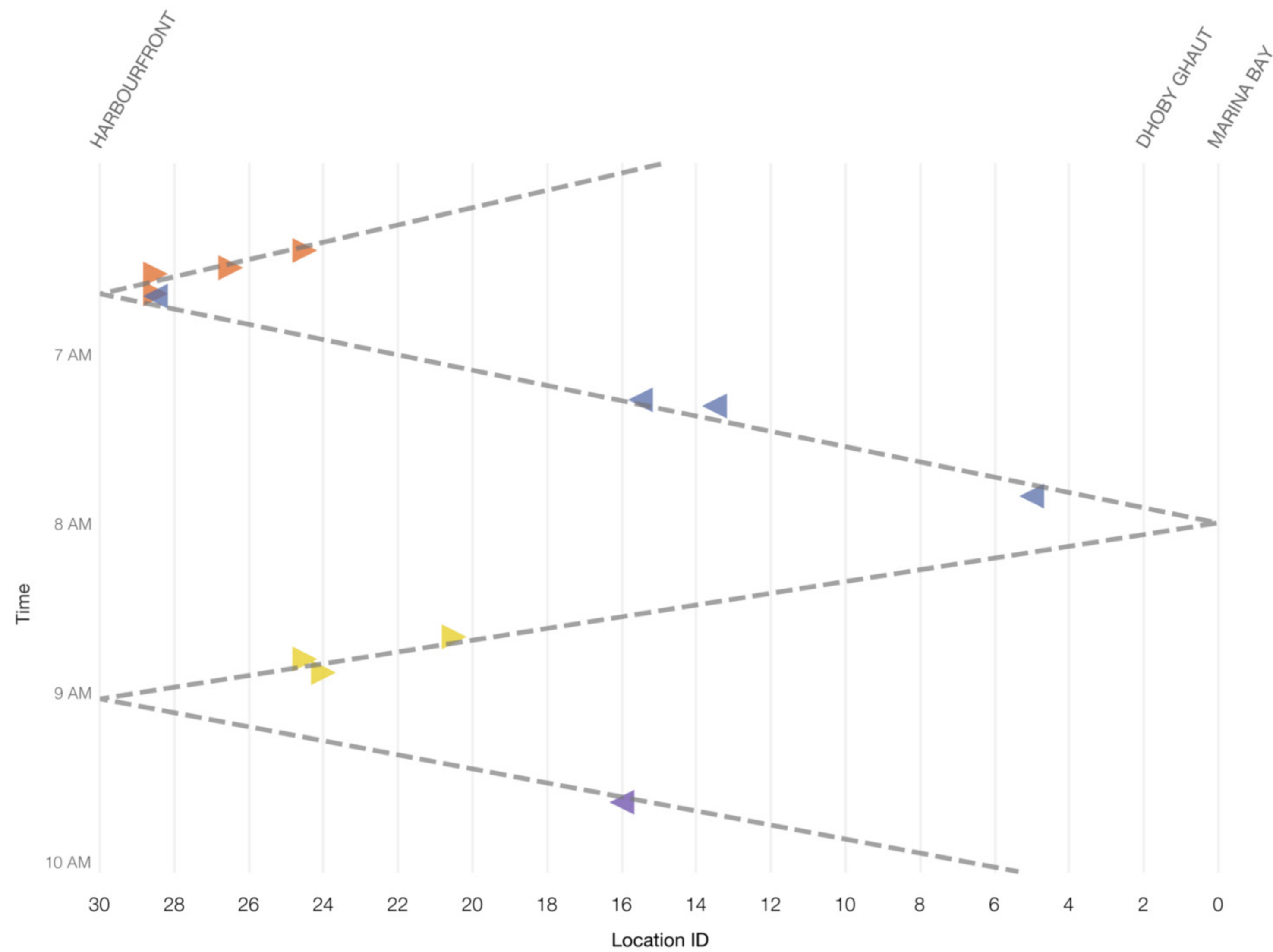
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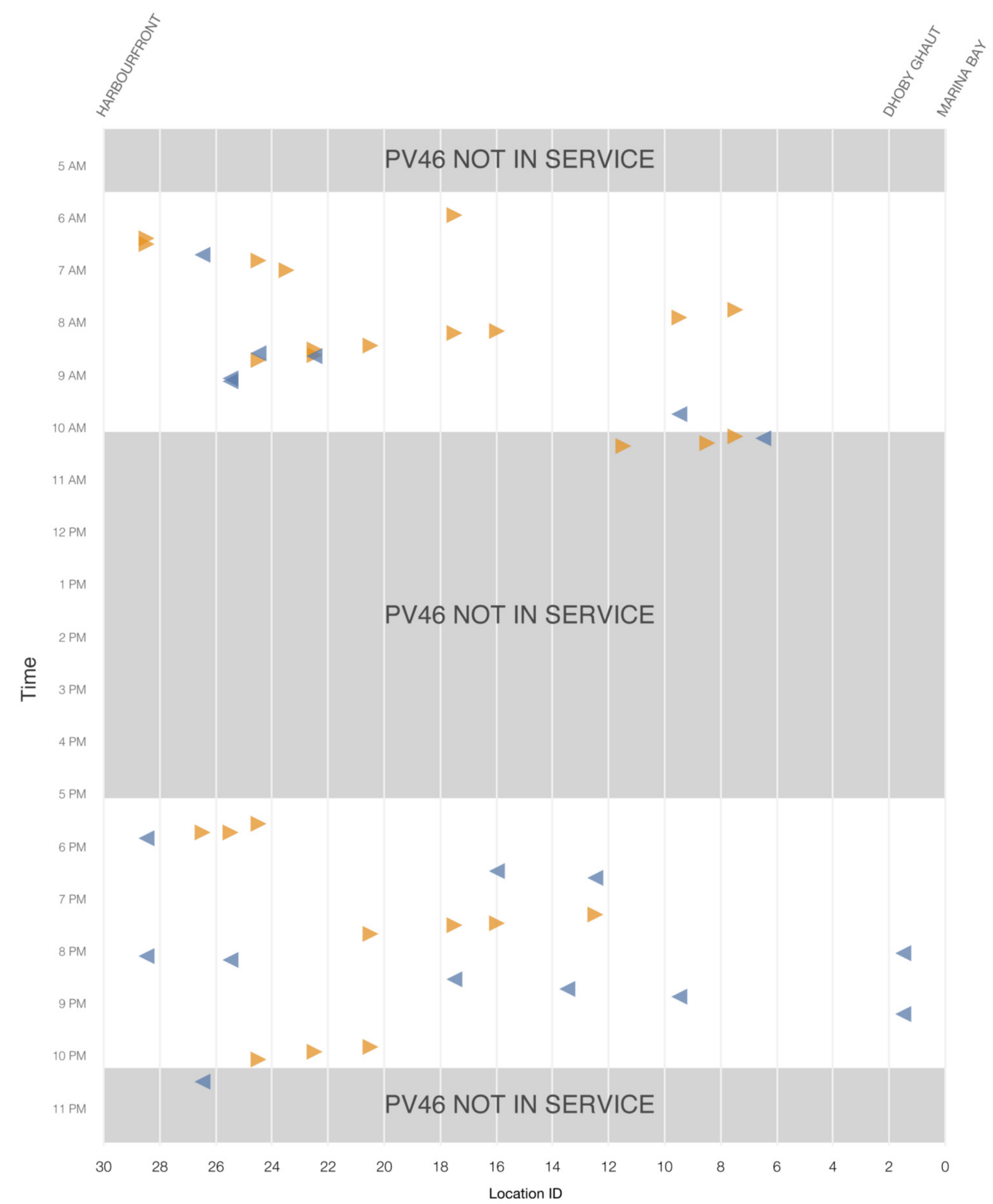
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The Data

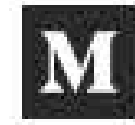


Testing



source: blog.data.gov.sg/how-we-caught-the-circle-line-rogue-train-with-data-79405c86ab6a

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Dec 1, 2016 · 8 min read

How the Circle Line rogue train was caught with data

Text: Daniel Sim | Analysis: Lee Shangqian, Daniel Sim & Clarence Ng

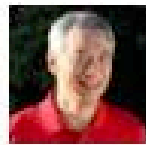
Singapore's MRT Circle Line was hit by a spate of mysterious disruptions in recent months, causing much confusion and distress to thousands of commuters.

Like most of my colleagues, I take a train on the Circle Line to my office at one-north every morning. So on November 5, when my team was given the chance to investigate the cause, I volunteered without hesitation.

... .

From prior investigations by train operator SMRT and the Land Transport

Recognition



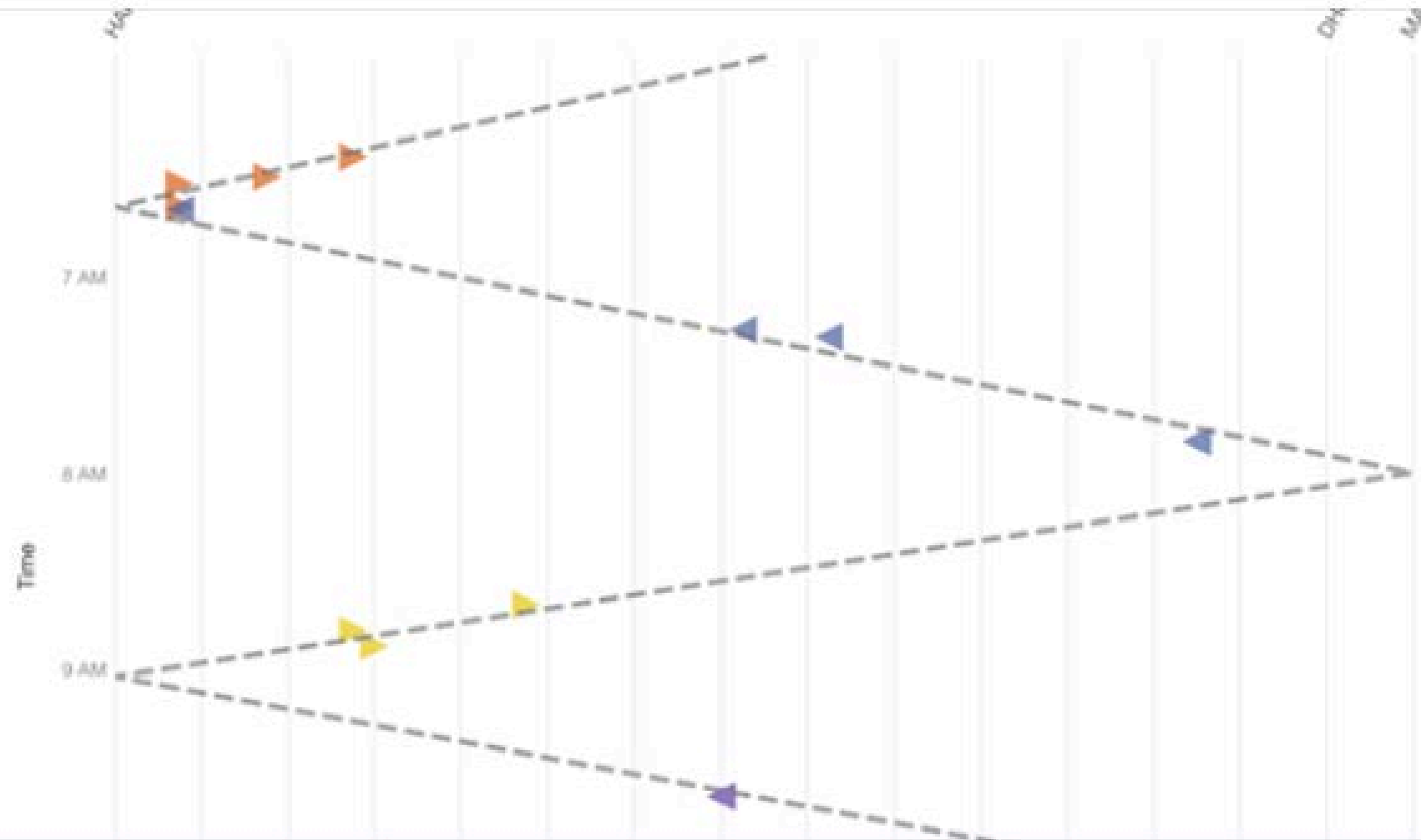
Lee Hsien Loong

about 2 years ago



Two weeks ago, [Ng Eng Hen](#) posted on Facebook ([bit.ly/2gLCI4n](#)) how a cross-agency team identified a rogue MRT train as the cause of the Circle Line disruptions. Here is a blog by data scientists at [GovTech \(Government Technology Agency of Singapore\)](#) explaining how they processed the data, plotted it graphically, and solved the mystery.

It is a fascinating account, demonstrating close teamwork, sharp analysis, and a never-say-die attitude. This is how a [#SmartNation](#) should use data to solve real-world problems. Proud of the team's good work, and a big thank you to all the officers who worked so hard to crack the puzzle! – LHL



BLOG.DATA.GOV.SG

How the Circle Line rogue train was caught with data

Data science meets the Marey Chart



6K



160



1.4K

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FRIDAY, OCTOBER 5, 2018 • 2 LIKES

A Train's Brakes Were Automatically Activated, Explained

In June, @NYCTSubway started reporting an awful lot of delays due to a train's brakes being automatically activated. It had rarely using this phrase before, but all of a sudden they were using it all the time. After about a month, the reader questions started rolling into my inbox: *what's the deal with that?*

In short, using this term is part of NYCT's efforts to be more transparent and accurate about why trains are delayed. Yet, it also reminds us how misleading some of the reasons provided in the past have been.

Often, the first instance of a delay is a train's brakes activating, which in NYCT jargon is called Brakes In Emergency or BIE. All types of things can cause a train to go BIE: signal problems, debris on the tracks, tripping a signal timer, or even a passenger pulling the emergency brake. Sometimes, a train going into BIE isn't a big deal. Other times, it is the first sign of a larger issue, which @NYCTSubway will often explain in a follow-up tweet once they figure out what it is. Think of BIE kind of like the subway version of the Mac spinning beach ball.

NYC MTA





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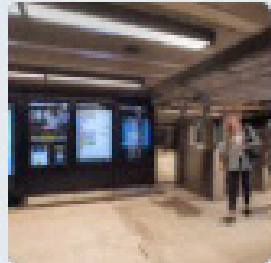
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2 and 3 train service has resumed.

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Northbound 2 and 3 trains are running with delays because of NYPD activity at Franklin Av.

1

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Northbound 2 and 3 trains are running with delays because of NYPD activity at Franklin Av.

2

5

MTA New York City Subway

NYCT Subway

@NYCTSubway · 2h

A and D train service has resumed.

NYC MTA

