



Business Intelligence

**You can't manage
what you don't measure**

- Peter Drucker



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What will We Learn Today?

1. What is Business Intelligence
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What is Business Intelligence





What is Business Intelligence?

BI (Business Intelligence) is a set of processes, architectures, and technologies that **convert raw data** into **meaningful information** that drives profitable business actions.

Business intelligence (BI) combines business analytics, data mining, data visualization, data tools and infrastructure, and best practices to help organizations to make more data-driven decisions.
(Tableau)





Why is BI important?

Business intelligence can help companies make smarter, **data-driven** decisions:

- Identify ways to increase profit
- Analyze customer behavior
- Compare data with competitors
- Track performance
- Optimize operations
- Predict success
- Spot market trends
- Discover issues or problems





Key Players in BI

Professional Data Analyst

Dive into data and get insights

IT Team

Maintain the infrastructure

Head of the Company

As decision makers get an overall bird's eye view

Business Users

Doing evaluation/monitoring



Business Intelligence & Data Science






BI & Data Science

Business Intelligence

Data Science

- **Analyze Data**
 - Do **Data Visualization** to gather insights
 - **Statistical Calculation**
- 

BI & Data Science

Business Intelligence

- Analyze with **Retrospection**
- Showing the **current** or **past** situation

Case of coming late to office

- Why we came late to office?
- Which street did we choose?
- What kind of transportation?

Data Science

- **Predicting a condition**
- **Statistical** Calculation

Case of coming late to office

- Showing options so we will not come late later
- Predict which street that will not stuck in traffic, which transportation to choose



Dashboard Constructing





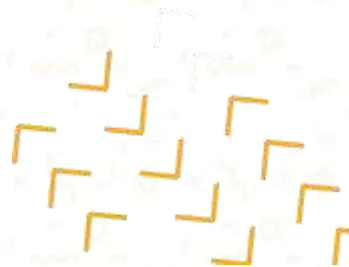
Dashboard and Report

Dashboard: informasi yang disajikan menyeluruh dan dapat dilihat dari waktu ke waktu

- Penjualan, revenue, dan profit
- Performa seseorang menggunakan voucher
- Pengeluaran tim operasional

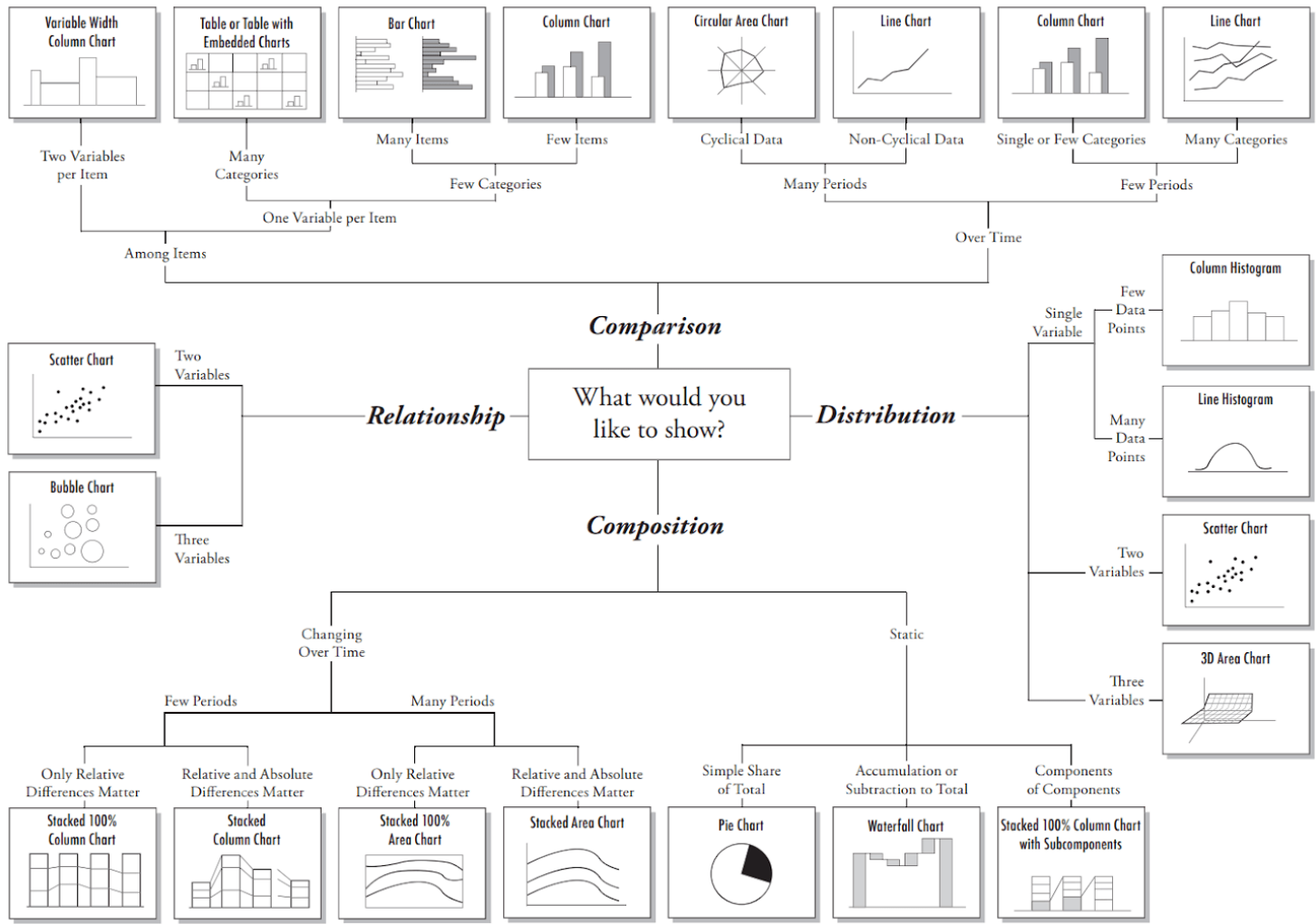
Report: spesifik informasi yang dibutuhkan dan dilihat secara periode mingguan, bulanan, atau tahunan

- Perbedaan penjualan setelah dilakukan kampanye oleh tim marketing
- Pertumbuhan kinerja bisnis model A dan bisnis model B dalam bulanan



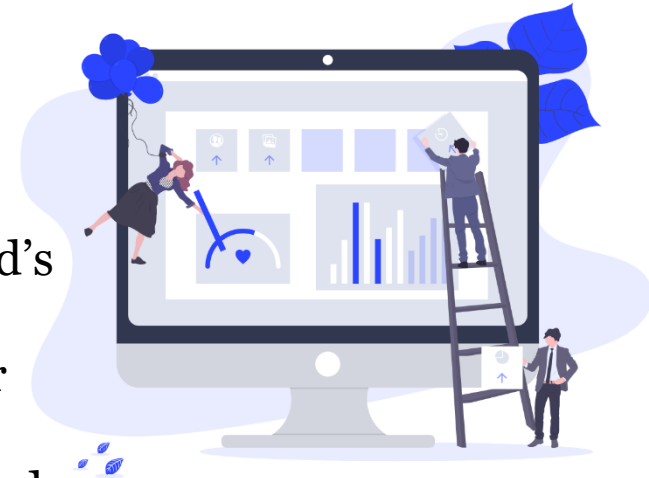
Data Visualization recap...

Chart Suggestions—A Thought-Starter



Dashboard Constructing

- **Be clear about what you're trying to achieve** – your board's purpose will inform its design
- **Only include what's important** – everything should support your board's intent
- **Use size and position to show hierarchy** – make it clear to the viewer what's most important
- **Give your numbers context** – help your viewers know if a number's good or bad
- **Group your related metrics** – make your metrics easy to find
- **Be consistent** – using the same visualizations and layouts makes comparing easier
- **Use clear labels for your audience** – keep them short and self explanatory
- **Round your numbers** – too much detail could make minor changes seem major
- **Keep evolving your dashboards** – check that your dashboard is encouraging the right behavior





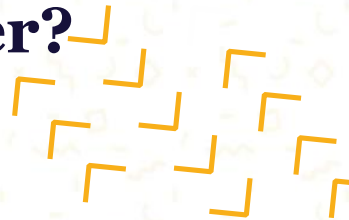
Be clear about what you're trying to achieve

What's the purpose of your dashboard?

Who's it for?

Focus on a specific goal?

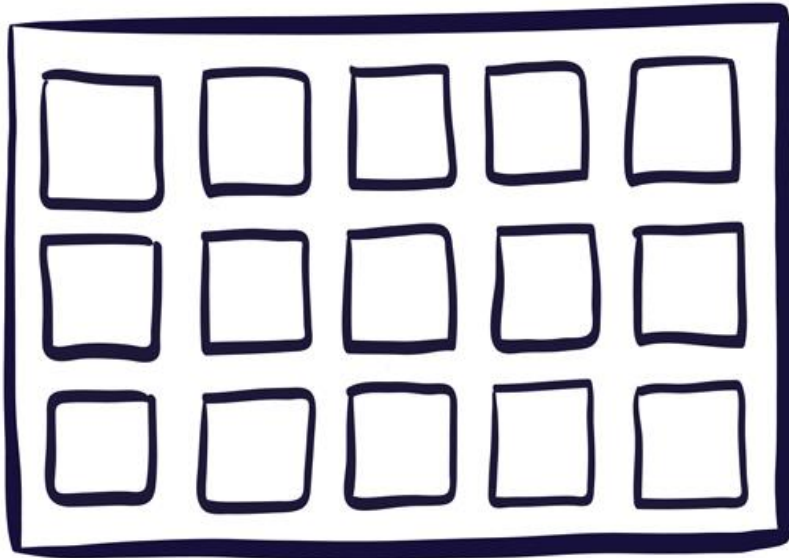
Make sure a particular type of problem gets noticed quicker?



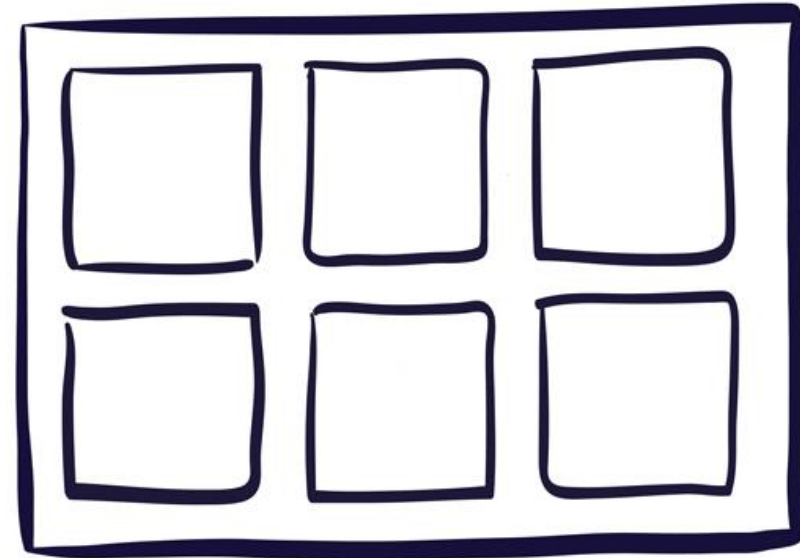


Only include what's important

More

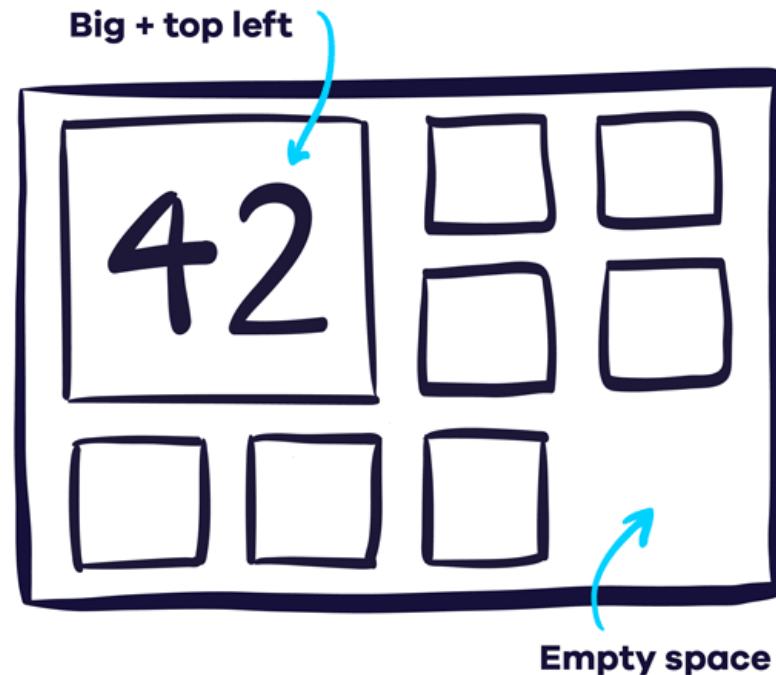
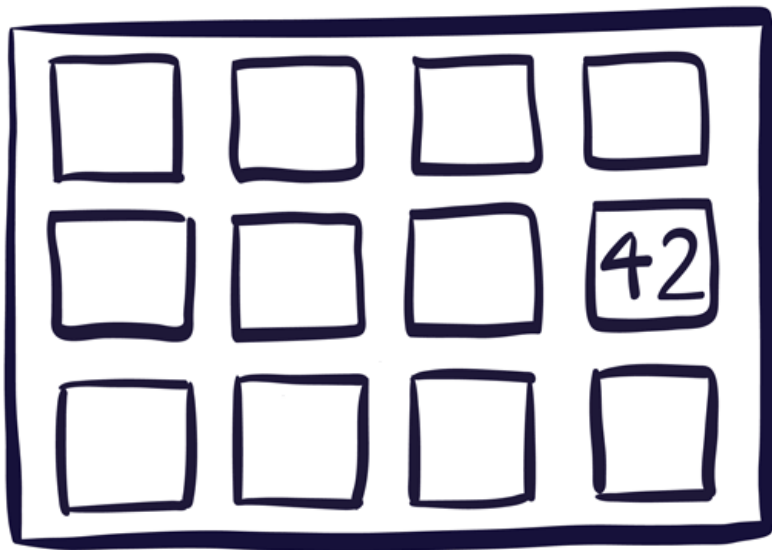


Less





Use size and position to show hierarchy





Give your numbers context

42

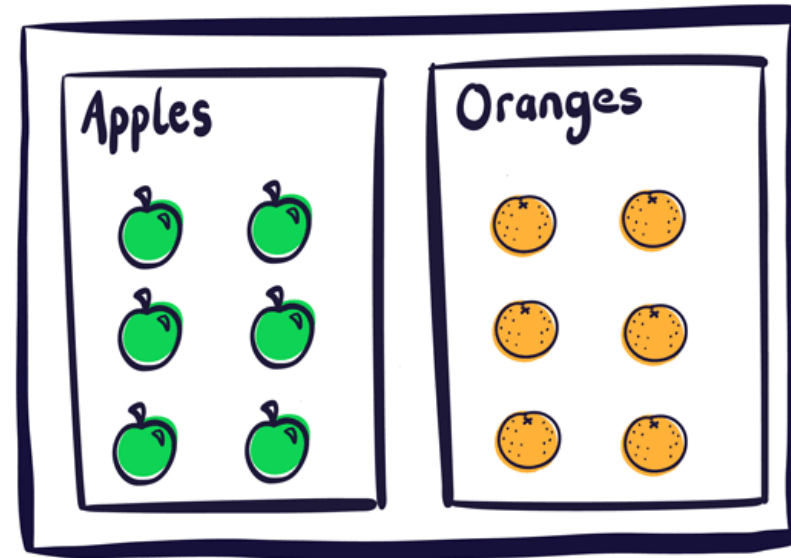
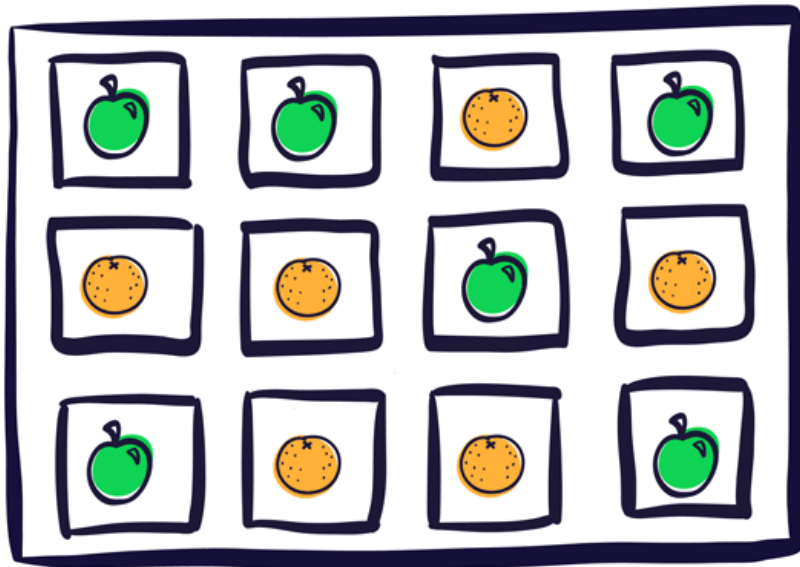


42
▲ 10%

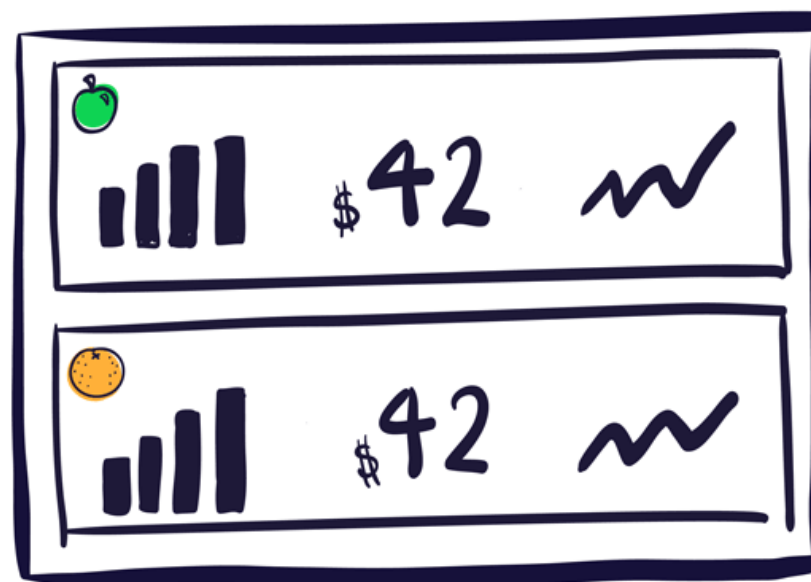




Group your related metrics



Be consistent



Round your numbers

\$ 19901
\$ 431.72

✗

\$ 19.9 _k
\$ 431

✓



Keep evolving your dashboards

Ask feedback to the team or stakeholder :

- What do they look at most often or find most useful, and why?
- What do they never look at or find least useful, and why?
- Is there anything missing that they'd find useful?
- Has it changed anything about the way they work?





BI Tools





Business Intelligence Tools

- Business intelligence (BI) tools are types of application software which collect and process large amounts of unstructured data from internal and external systems
- These tools also help prepare data for analysis so that you can create reports, dashboards and data visualizations





Business Intelligence Tools



Metabase



Company-wide KPI dashboard

Date Filter
Before January 1, 2020 x

State

\$46,201.07

MoM Revenue

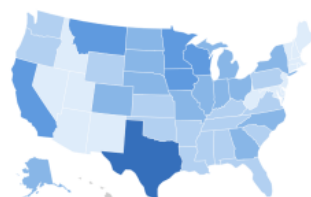
↑ 1.7%

47,136

MoM New Users

↓ 27%

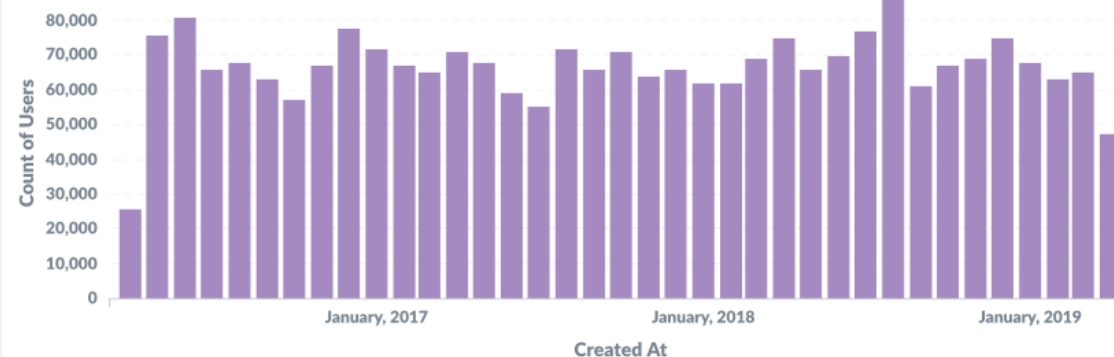
Users Per State



982 - 29.5k 36.3k - 56.0k
 59.9k - 79.5k 85.4k - 106.0k
 190.5k +



New users per month



Example KPIs dashboard

■ Demo Dashboards



Dashboard subscriptions

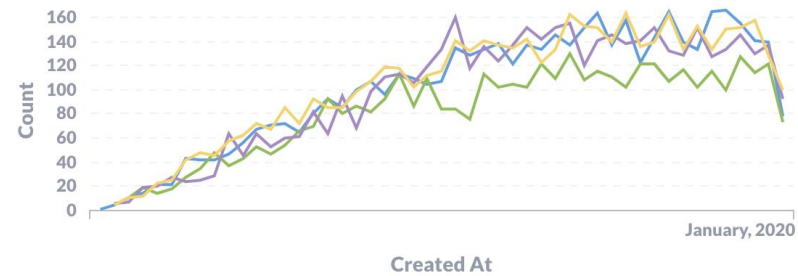
Sharing and embedding

 Product Category

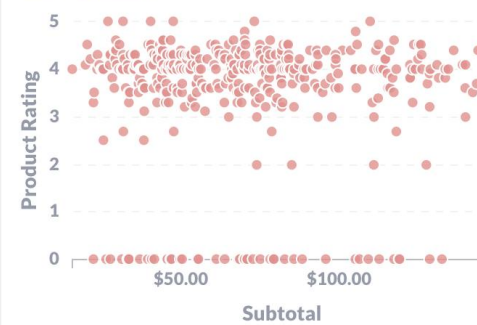
 Product Title

Orders by Product Line

● Electronics ● Home and Office ● Kitchen ● Industrial

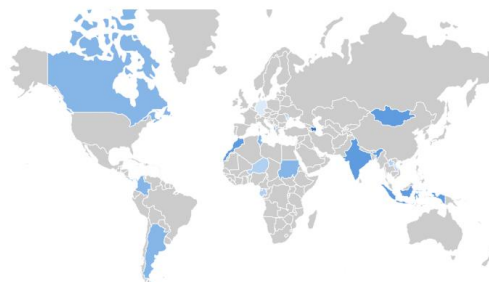


Price vs Rating



Avg Revenue by Country (new territories)

● 6.5M - 7.0M
● 7.4M - 7.6M
● 7.6M - 7.8M
● 7.8M - 8.0M
● 8.2M +



Reviews by Rating





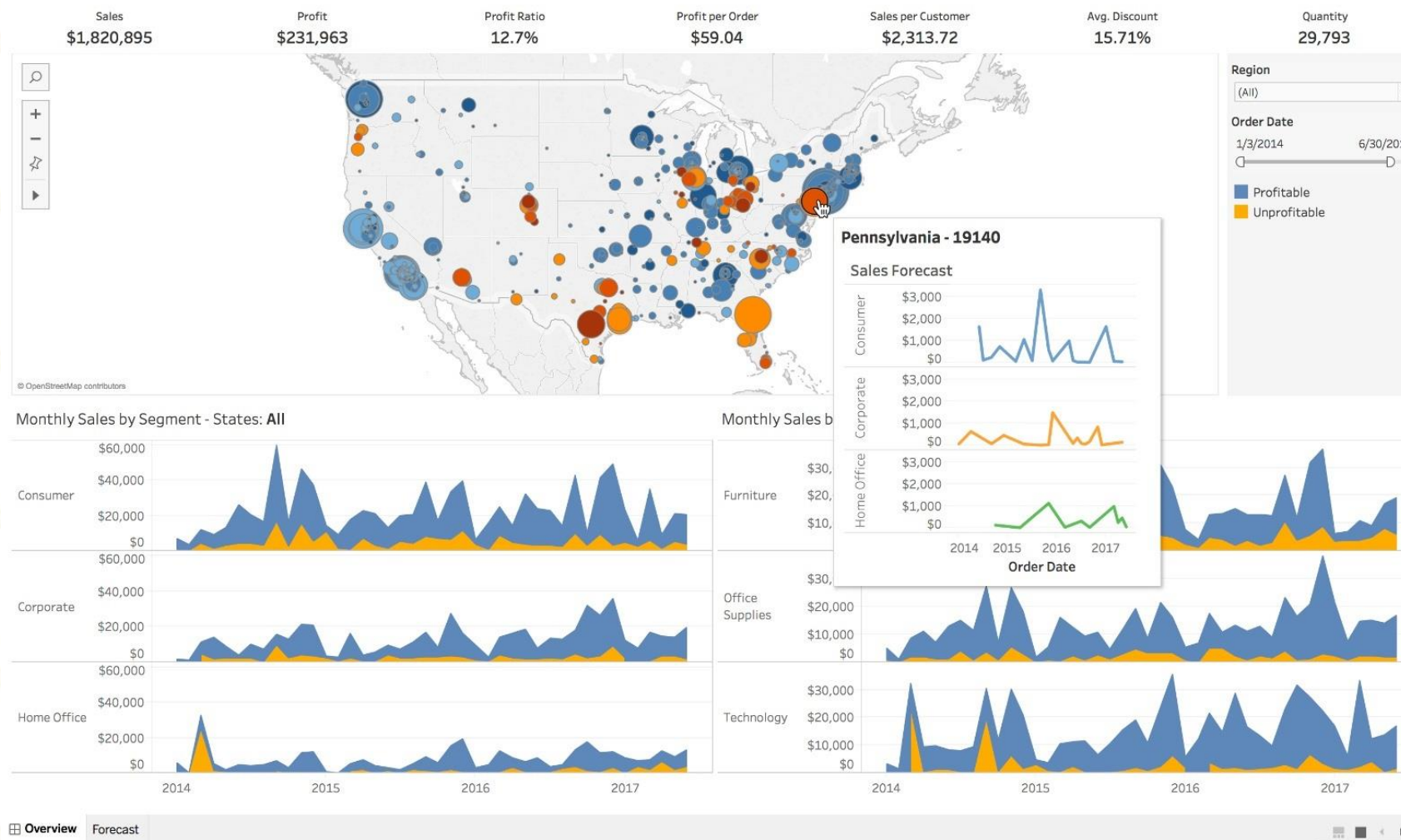
Business Intelligence Tools



+ a b | e a u[®]



Executive Overview - Profitability (All)



Einstein Discovery | Will Our Customers Pay On Time?

\$145,719
Invoice amount

\$20,900
Amount Impacted by Late Payment (Predicted)

2,437
Number of Invoices

13%
% Late Payment Predicted

552
Number of Disputed Invoices

Predicted Delays Per City | Circle size shows amount impacted | Hover over to see details



32%

Likelihood to be paid on time 2,437 selected rows

Top Predictors:

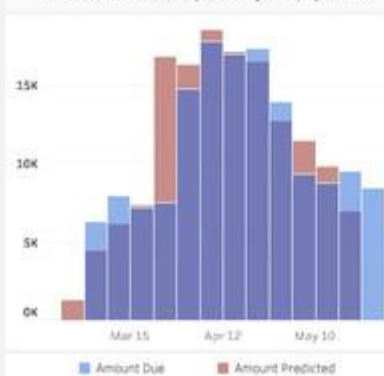
- 1.6 Disputed is No (960 rows)
- 0.6 Disputed is Yes (343 rows)
- 0.53 Payment term is 30 days (327 rows)

How To Improve This:

- 16.96 Change Payment term to 60 days (1,002 rows)
- 9.79 Change invoice type to Electronic (1,085 rows)

Powered by Einstein Discovery

Predicted Cashflow impacted by late payments



Accounts With Late Payment Predicted

Sort By: Number of Predicted Late Invoices

Account Name	Delayed Payments (% total)	Invoices Predicted to Delayed Payment
Voomm	81%	17
Browsedriv	56%	15
Jabberbean	58%	15
Thoughtston	39%	15
Vitz	48%	15
Browsebug	42%	13
Muumm	34%	12
Eare	33%	11
Twitterbea	48%	11
Centizu	59%	10
Jabbercube	20%	10
Innojam	33%	9
Centimia	23%	8
Jetpulse	33%	7
Cyspe	26%	7
Realcube	9%	7
Skyble	32%	7
Skyndu	30%	7
Yabox	32%	7
Aibox	14%	6
Brainloug	34%	6
Ipio	12%	6
Zar-o	19%	6
Divanoodis	24%	5
Gabbane	19%	5
Lewns	17%	5
Myworks	11%	5

Will Our Customers Pay On ... Will Our Customers Pay on TL... Invoice Details

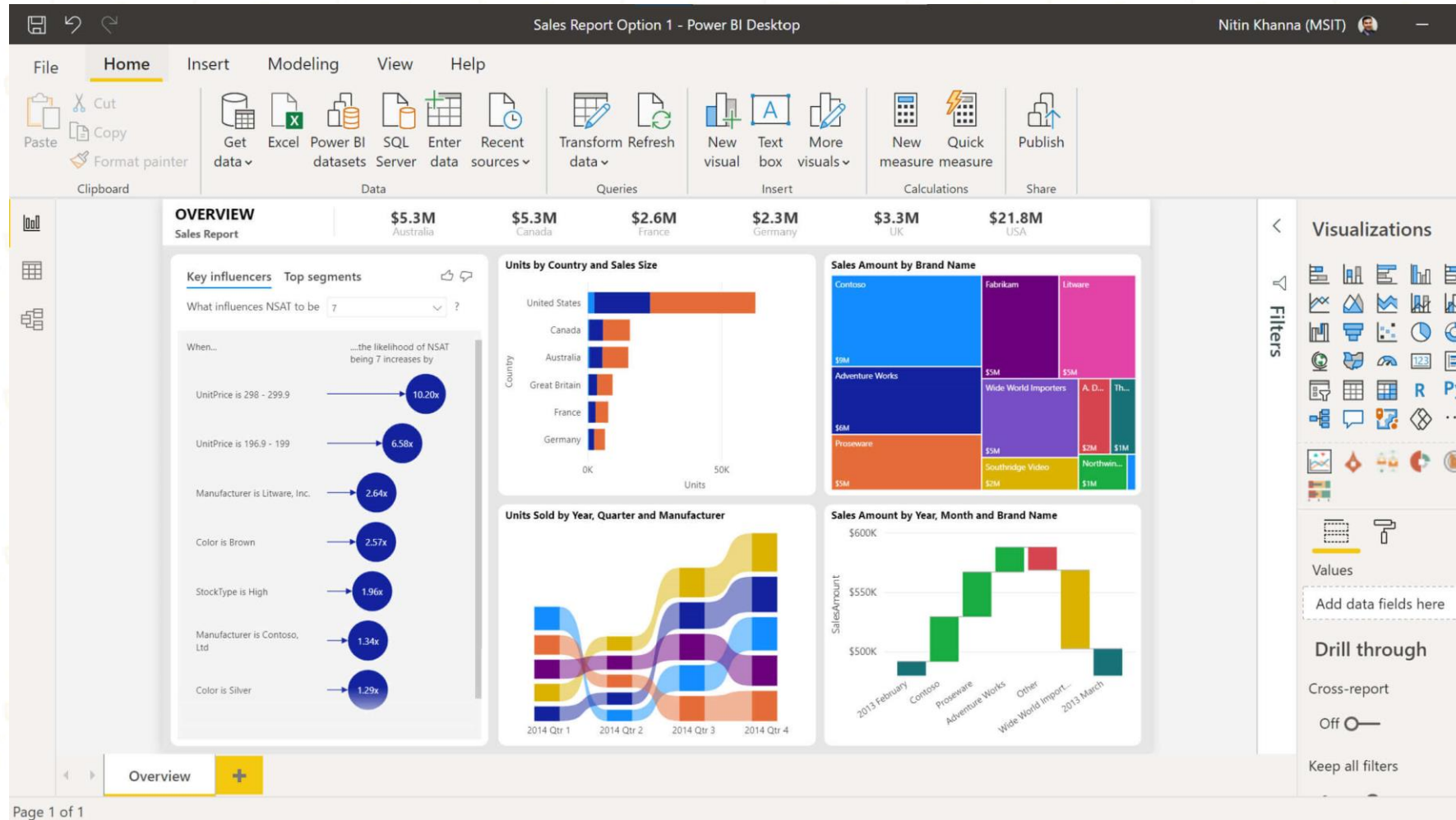


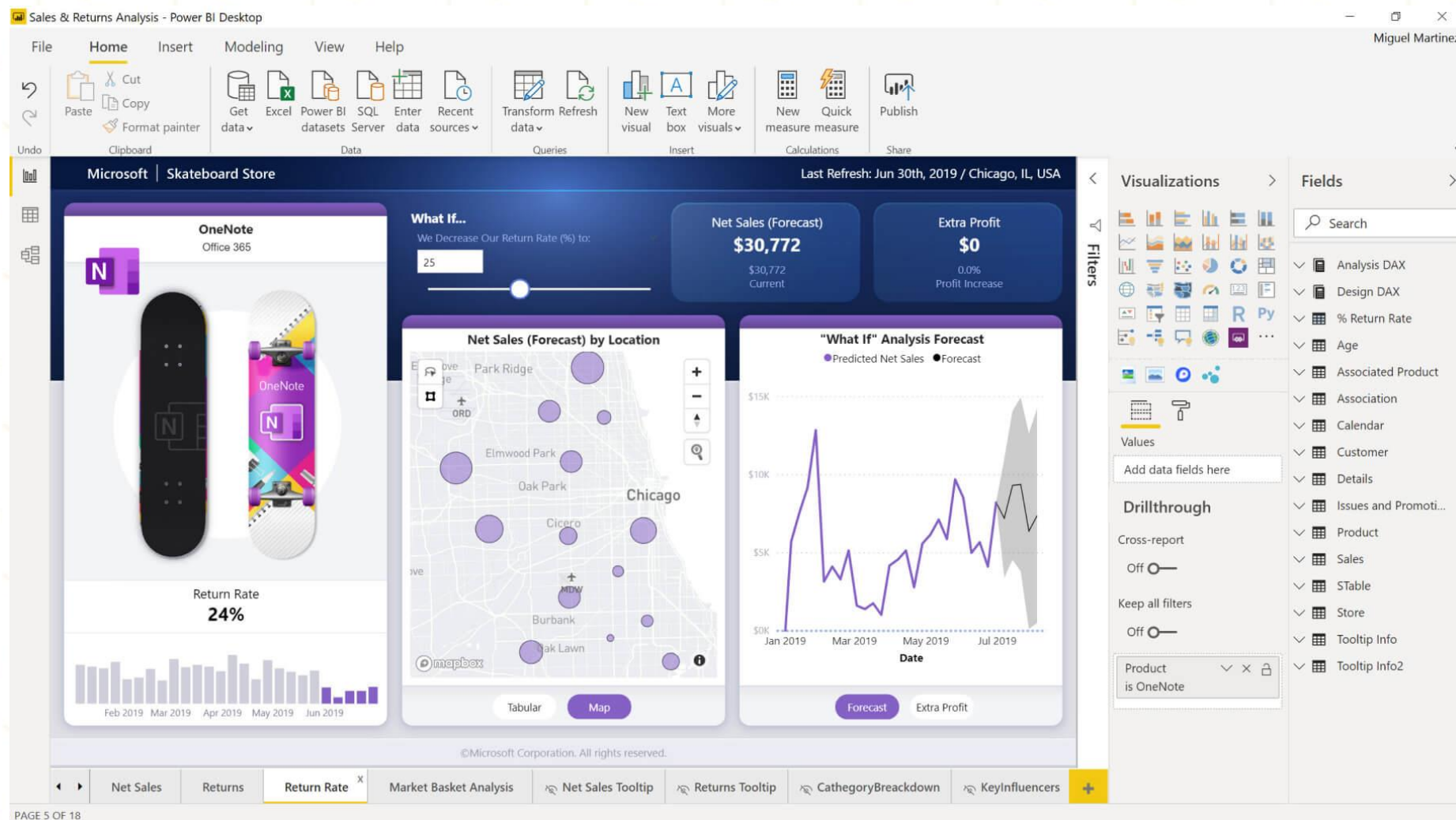
Business Intelligence Tools



Power BI









Business Intelligence Tools



Google Data Studio



Create

Recent

Reports

Data sources

Explorer

Recent

Shared with me

Owned by me

Trash

Start with a Template

Blank Report
Data Studio

Tutorial Report
Data Studio

Acme Marketing
Google Analytics

Search Console Report
Search Console

Google Ads Overview
Google Ads

Template Gallery

Name

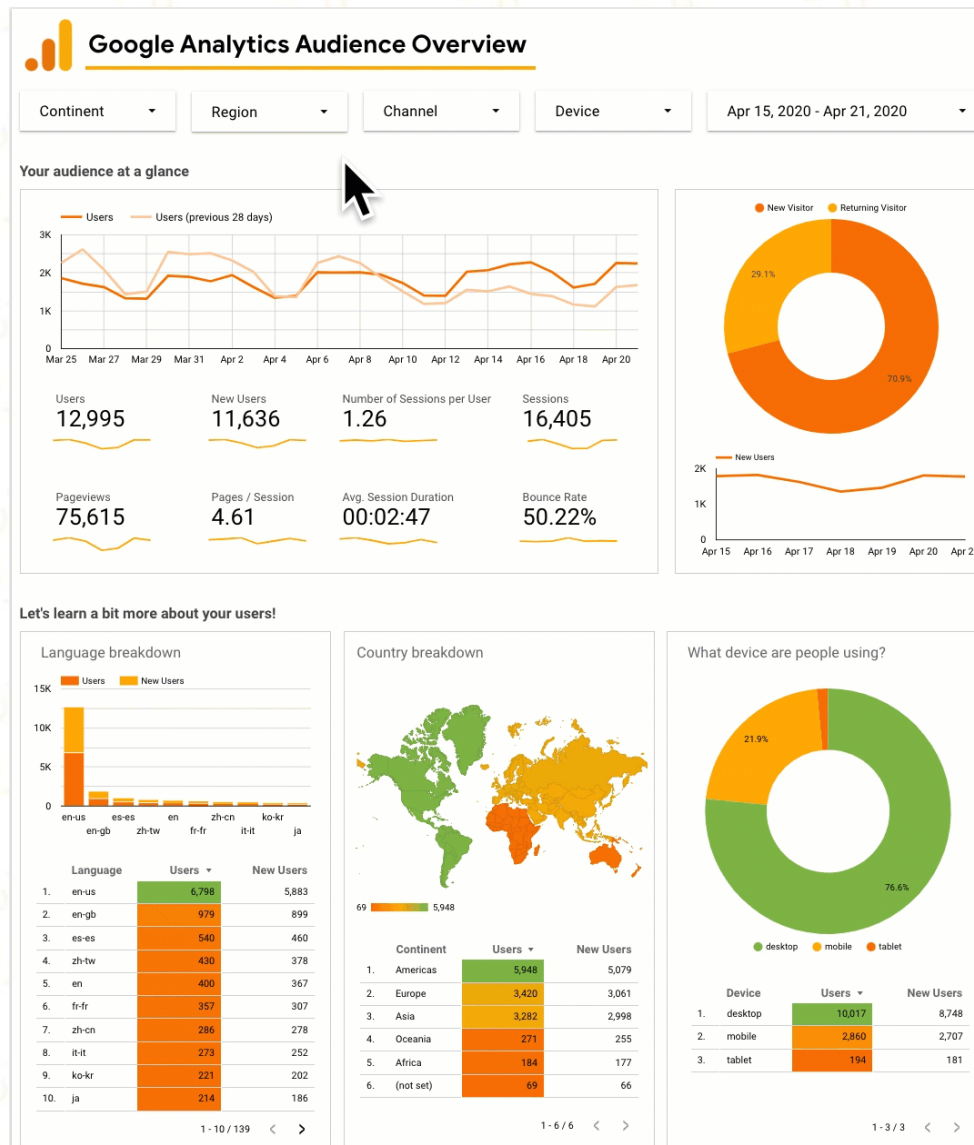
Owned by anyone

Last opened by me



Create a Report

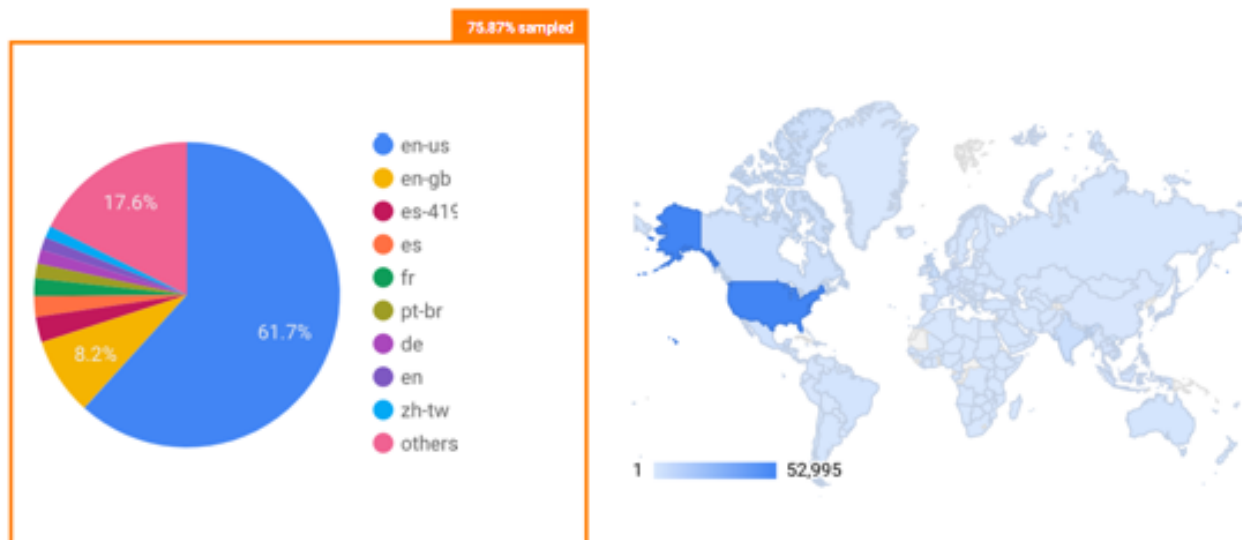
Use the Create button to add one.



79.75% sampled

	Language	City	Users ▾	New Users	Sessions
1.	en-us	Mountain View	2,932	1,987	4,299
2.	en-us	(not set)	2,621	2,462	3,059
3.	en-us	New York	2,102	1,733	2,901
4.	en-us	San Francisco	1,551	1,208	2,093
5.	en-us	Sunnyvale	1,476	986	2,263
6.	en-us	San Jose	957	719	1,314

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Google Data Studio



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<https://datastudio.google.com/>



Thank You

