

GOVT ARTS AND SCIENCE COLLEGE FOR WOMEN, KARIMANGALAM

Project Title

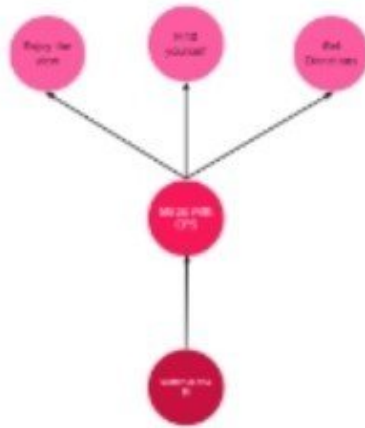
**iRevolution: A Data-driven Exploration of Apple's iPhone Impact in
India**

Project Submitted By

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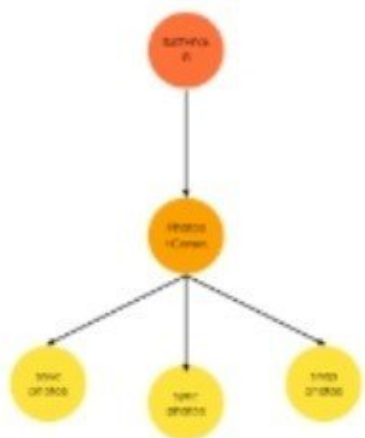
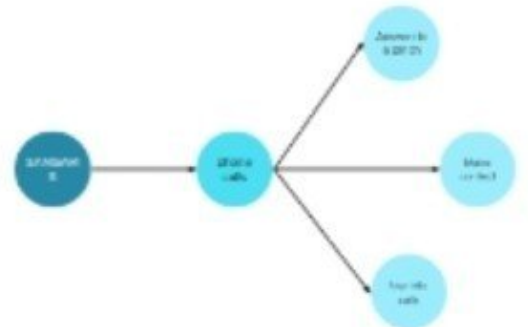


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iRevolution: A Data-driven
Exploration of Apple's
iPhone Impact in India



iRevolution: A Data-driven Exploration of Apple's iPhone Impact in India

The world has changed as a consequence of the increasing use of smartphones, which have improved communication, connected people, and revolutionized many different businesses. With its main product, the iPhone, capturing markets around the world, Apple Inc. has emerged as a prominent player among the top smartphone makers. India, one of the economies with the greatest economic growth, has seen a tremendous increase in smartphone usage, making it an interesting market to study the effects of Apple's iPhone.

In order to shed light on important factors like market penetration, customer preferences, economic ramifications, and societal changes, this research report will perform a data-driven investigation of the impact of the iPhone in India. This study will offer invaluable insights into the transformative impact of the iPhone on India's technological landscape and the lives of its consumers by using advanced data analytics techniques and analyzing large datasets.

Apple has a special chance to increase its market share and develop a significant presence in India thanks to the country's large population and rising smartphone adoption. Each new iPhone model unveiling generates excitement and anticipation among Indian buyers. By utilizing the plethora of information already accessible, this research aims to go beyond conjecture and anecdotal evidence in order to develop a thorough knowledge of the effects of the iPhone.

Technical Architecture:

The technical architecture involves leveraging the data analytics capabilities of Tableau for visualizations and analysis. The architecture comprises several components to ensure efficient data processing and visualization.

At the core of the architecture is the data infrastructure, which includes data sources such as market reports, economic indicators, and surveys conducted among iPhone users in India. These data sources are collected and stored in a structured format for further analysis. Tableau is used as the primary data visualization tool. It connects to the data sources and allows for data extraction, transformation, and loading (ETL) processes. Tableau's intuitive interface enables users to create interactive and visually appealing visualizations, charts, and dashboards based on the analyzed data.

ProjectFlow:

To accomplish this, we have to complete all the activities listed below,

- Define Problem/Problem Understanding
 - Specify the business problem
 - Business requirements
 - Literature Survey
- Data Collection & Extraction
 - Collect the dataset
 - Connect Dataset with Tableau
- Data Preparation
 - Prepare the Data for Visualization
- Data Visualizations
 - No of Unique Visualizations
- Dashboard
 - Responsive and Design of Dashboard
- Story
 - No of Scenes of Story
- Performance Testing
 - Utilization of Data Filters
 - No of Calculation Fields
 - No of Visualizations/Graphs
- Publishing
 - Publishing Dashboard and Story to Tableau Public
- Project Demonstration & Documentation
 - Record explanation Video for project end to end solution
 - Project Documentation- Step by step project development procedure

Milestone 1: Define Problem/Problem Understanding

Activity 1: Specify the Business Problem

The objective of this study is to obtain a thorough understanding of how Apple's iPhone would affect the Indian market. In particular, we want to investigate the market penetration of iPhones in India, comprehend consumer preferences and decision-making processes, and assess the social and economic effects of iPhone adoption. We aim to offer insights that can direct strategic decisions for Apple and other stakeholders active in the Indian smartphone industry by leveraging data analytics and visualizations using Tableau.

Activity 2: Business Requirements

The project's business needs call for data analysis and visualization in order to understand how Apple's iPhone has affected India. This entails looking at customer choices, market penetration, sociological developments, and economic effects.

Tableau visualizations should be interactive, understandable, and educational so that stakeholders can make data-driven decisions and comprehend the impact of the iPhone on the Indian market.

Activity 3: Literature Survey

A literature survey would involve a search for relevant publications, articles, and academic papers on the topic, as well as an analysis of the various techniques, models, and algorithms used in previous research. The literature survey would also involve identifying gaps in existing research and potential areas for further exploration and improvement.

Activity 4: Social or Business

Impact. Social Impact:

An important component of this study is the societal impact of Apple's iPhone in India. We intend to investigate how the iPhone has altered communication, information access, and social relationships in Indian society through data analytics and Tableau visualizations.

Studying the impact of iPhones on social media use, online content consumption, and the broader digital divide are all included in this. Policymakers and organizations can better manage the benefits and difficulties brought on by the expanding smartphone adoption by understanding the social impact.

Business Impact:

Research must focus on how Apple's iPhone has affected business in India. We seek to examine the

economic effects of iPhone uptake in the Indian market using data analytics and Tableau visualizations.

Examining iPhone sales data, market share, revenue creation, and its effects on different industries like

e-commerce, app development, and digital payments are all part of this.

Organizations can find possibilities for growth and innovation by understanding the business impact and using it to help them position themselves in their markets and make strategic decisions.

Apple continues to strengthen its standing in the smartphone market. The brand has risen to a position of particular dominance in the US.

6 of the top 10 most sold smartphone models in January 2021 were designed by Apple.

More than 1 billion consumers currently use iPhones. Since its initial launch, more than 1.9 billion iPhones have been sold. iPhone sales in 2021 surpassed the 2015 peak, but declined in 2022 to 232.2 million units.

iPhone sales generated \$205 billion revenue for Apple in 2022, more than Microsoft's total revenue. It sold 232 million iPhone units that year.

Comparative analysis of leading brands in India shows that iPhone's 3% market share is depicted.



iRevolution- Think DIFFERent

Year

2022

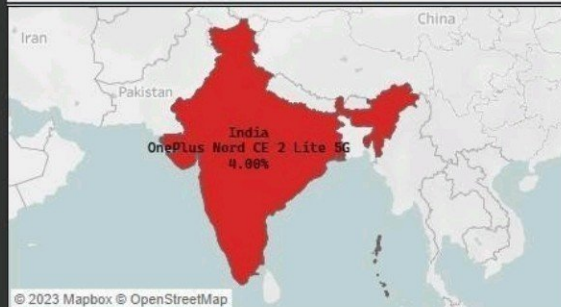
Country

India

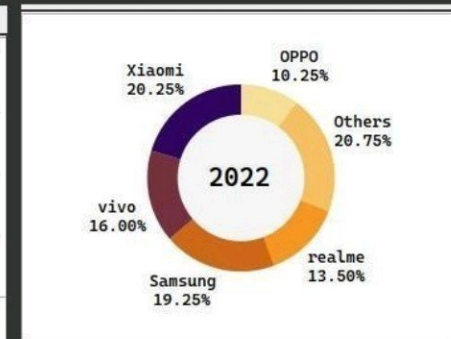
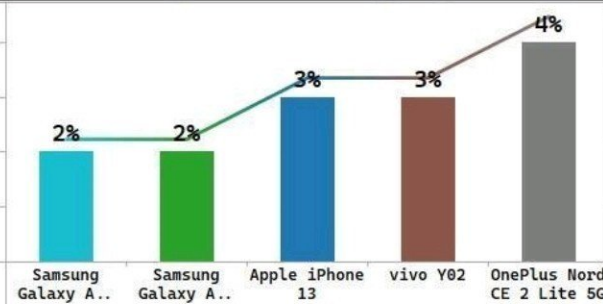
Brand

OPPO

Global Market Share



Country-wise best selling smartphone



Brand Price comparison

APPLE 8 89,990	NOTHING 1 39,999	MOTOROLA 4 17,999	XIAOMI 6 17,999	IQOO 3 17,999	REALME 5 17,999
	SAMSUNG 5 18,999	VIVO 5 19,990	INFINIX 5 17,999	I KALL 2 17,999	
GOOGLE 2 51,999	ONEPLUS 2 19,999	OPPO 4 19,499	TECNO 4 17,999	LAVA 3 17,999	MARQ 1 17,999

Battery Type Distribution





iRevolution- Think DIFFERent

Year

2020

Country

India

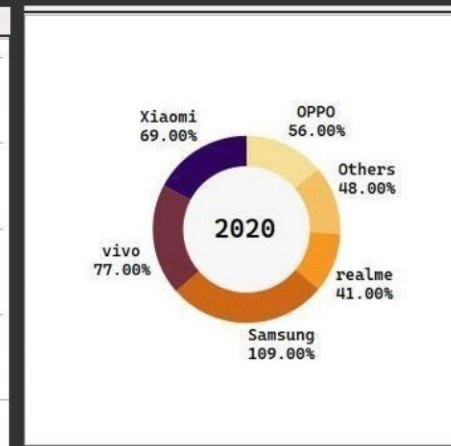
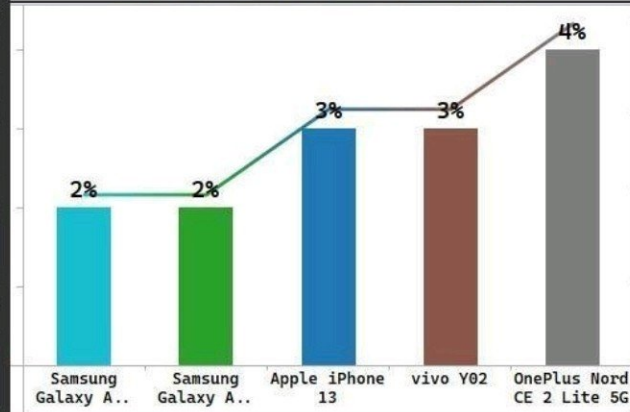
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Battery Type Distribution



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Comparative analysis of leading brands in India shows that iPhone is the most popular brand in India. Its 3% market share is depicted below.



iRevolution

Year

2013

Brand

MOTOROLA

Colour

(All)

KPI

Units sold (mm)	Revenue Generated (\$bn)	Active Users (mm)
150.2	91.2	329.0

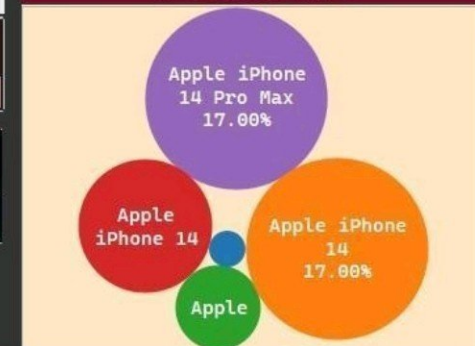
Brand	Mrp	Sale Price	Star Rating	Discount Percentage	Number Of Reviews
Apple	59,900	54,999	5	8	3,331

Annual Revenue (2006- 2022)



iRevolution- Think DIFFERent

Model wise share



Model specification

Model	Processor	Front Cam..	Colour	Rear Camera	Price
MOTO C PLUS	Mediatek MTK6737 Quad Core 1.3Ghz	2MP	Starry Black	8MP	₹ 17,999.00
MOTO G71 5G	Qualcomm Snapdragon 695	16MP	Neptune Green	50MP + 8MP + 2MP	₹ 22,999.00
MOTOROLA E7 POWER	MediaTek Helio G25	5MP	Tahiti Blue	13MP + 2MP	₹ 11,999.00
MOTOROLA E13	Unisoc T606	5MP	Aurora Green	13MP	₹ 20,998.00
			Cosmic Black	13MP	₹ 20,998.00

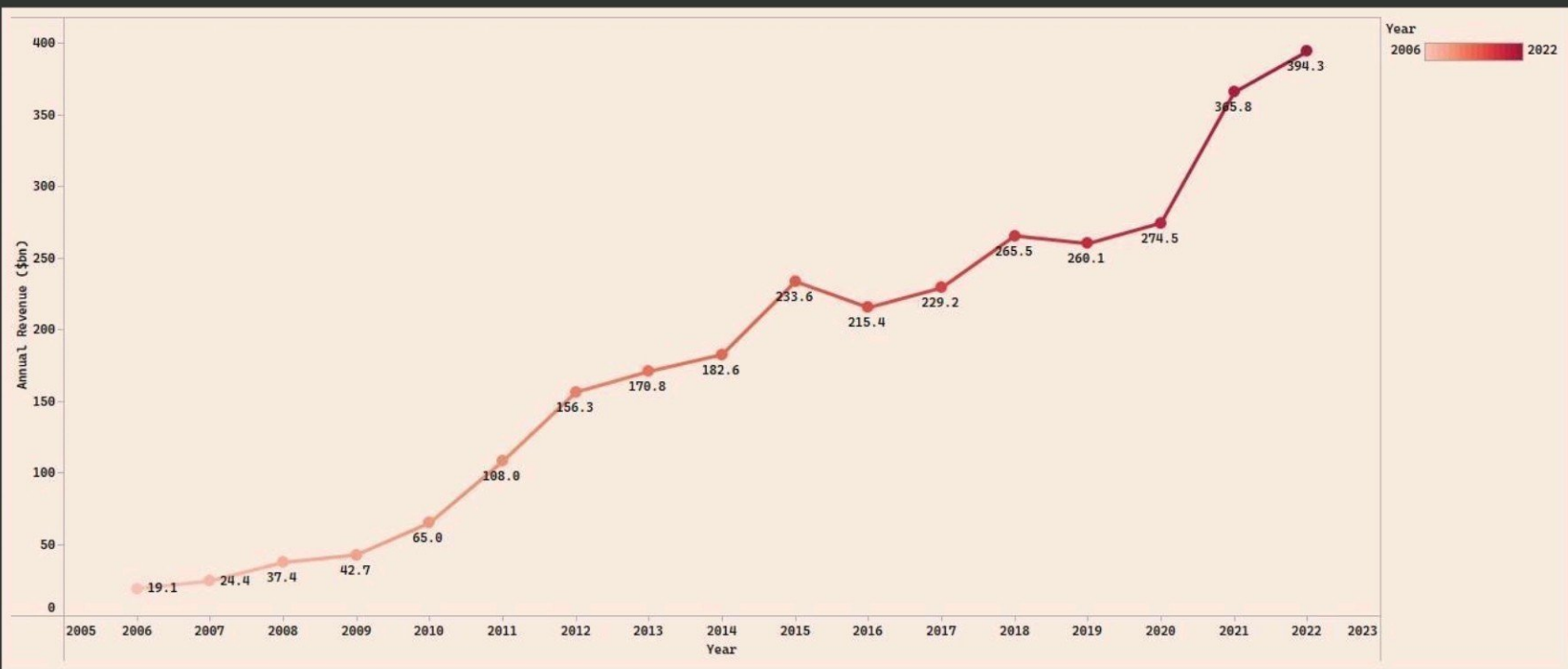
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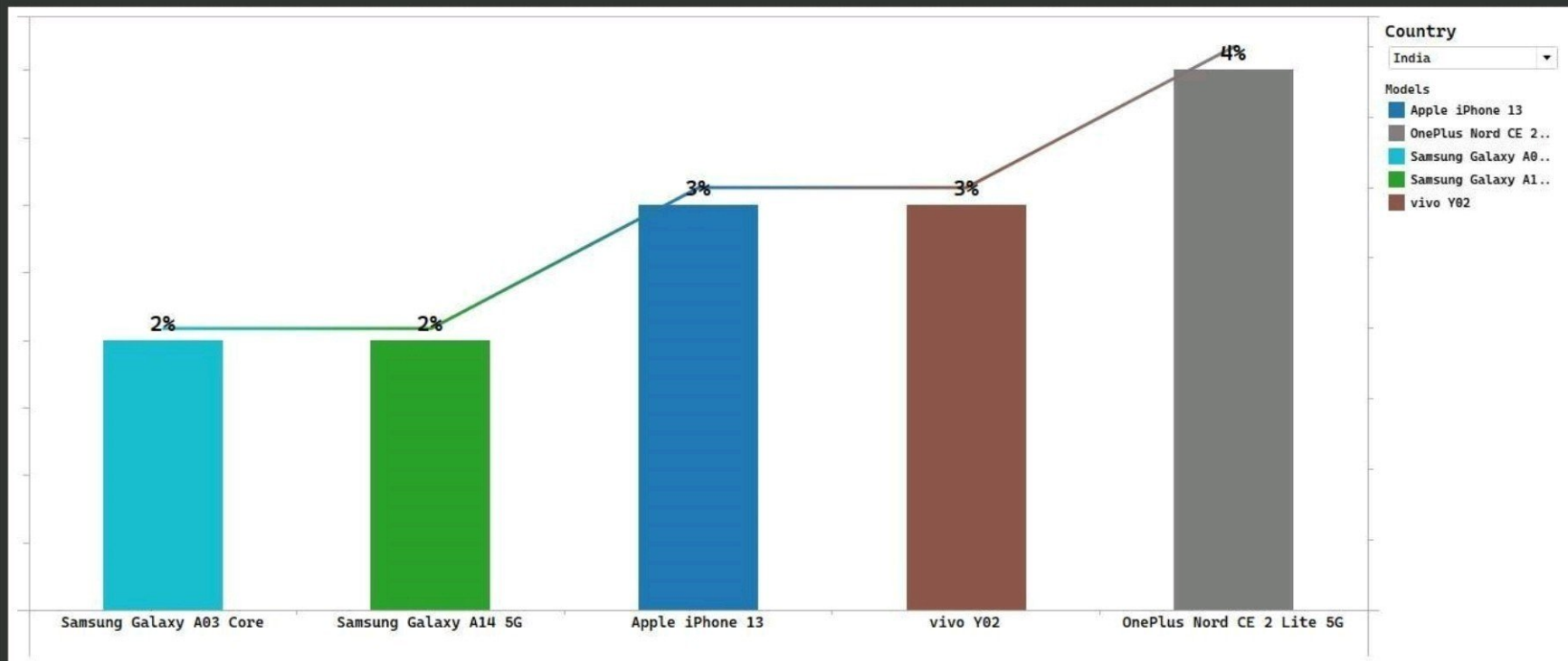
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iPhone sales generated \$205 billion revenue for Apple in 2022, more than Microsoft's total revenue. It sold 232 million iPhone units that year.

Comparative analysis amongst various other leading brands in the smartphone industry shows that iPhone is yet to make it's impact in India. Its 3% market share in the global market is depicted in the line-bar graph.

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Milestone2:Data CollectionandPreparation:

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes and generate insights from the data.

Activity1:Collectthedataset

Please use the link to download the dataset: [Link](#)

Activity1.1:Understand thedata

Data contains all the meta information regarding the columns described in the CSV files. We have provided the XLSX file:

ColumnDescriptionforBigML_Dataset.csv:

The file apple_products.xlsx contains a total of 7 sheets. Each sheet corresponds to a different parameter related to iPhones/Smartphones.

The sheets are:

- apple_products.csv
- Flipkart_smartphone
- Annual revenue
- Market penetration (iPhone)
- Countrywise share
- Quarterly-share
- Model-wise share

Milestone3:DataPreparation

Activity1:PreparetheDataforVisualization

Data modules are containers that describe data and rules for combining and shaping data to prepare it for analysis and visualization in Tableau. Data module sources. Data modules can be based on data servers, packages, uploaded files, datasets, and other data modules.

Milestone4:DataVisualization

Data visualization is the process of creating graphical representations of data in order to help people understand and explore the information. The goal of data visualization is to make complex data sets more accessible, intuitive, and easier to interpret. By using visual elements such as charts, graphs, and maps, data visualizations can help people quickly identify patterns, trends, and outliers in the data.

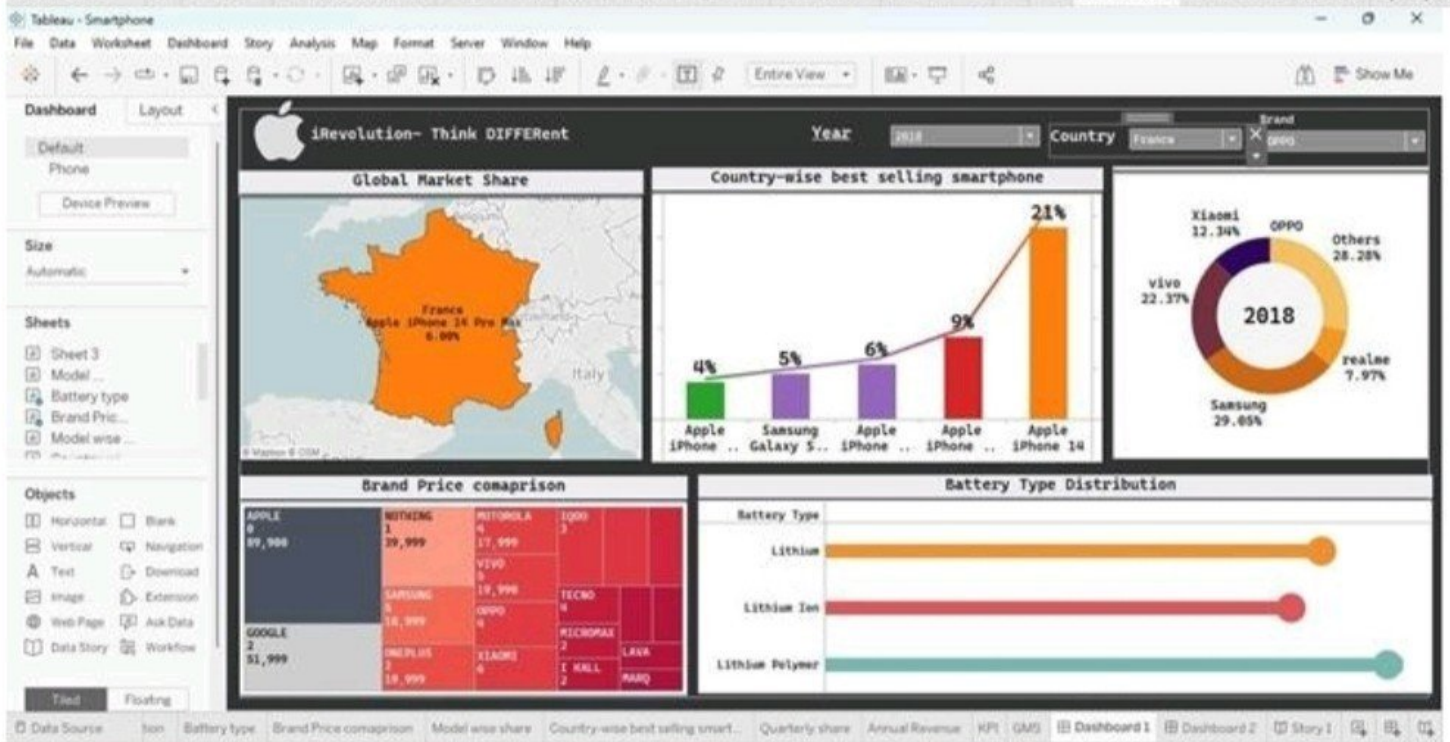
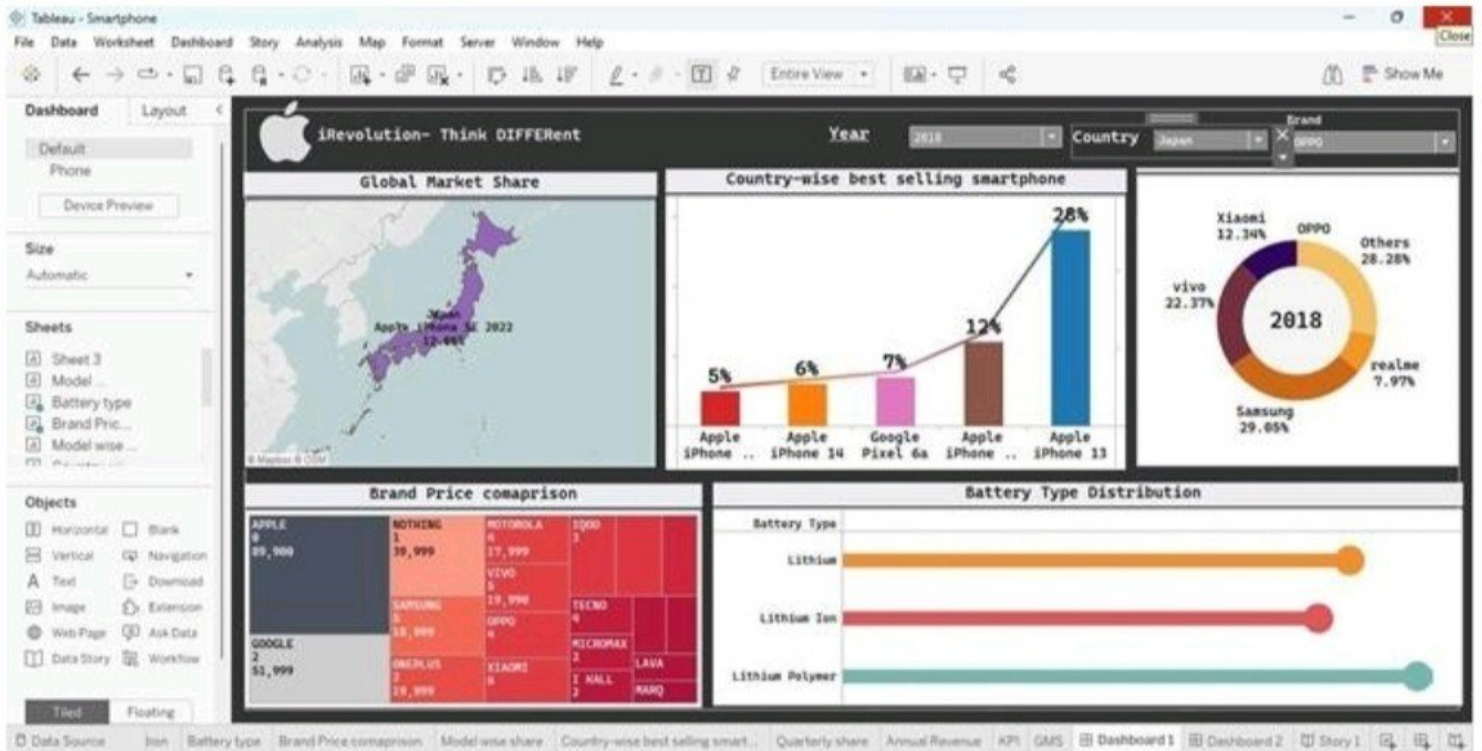
Activity1:NoofUniqueVisualizations

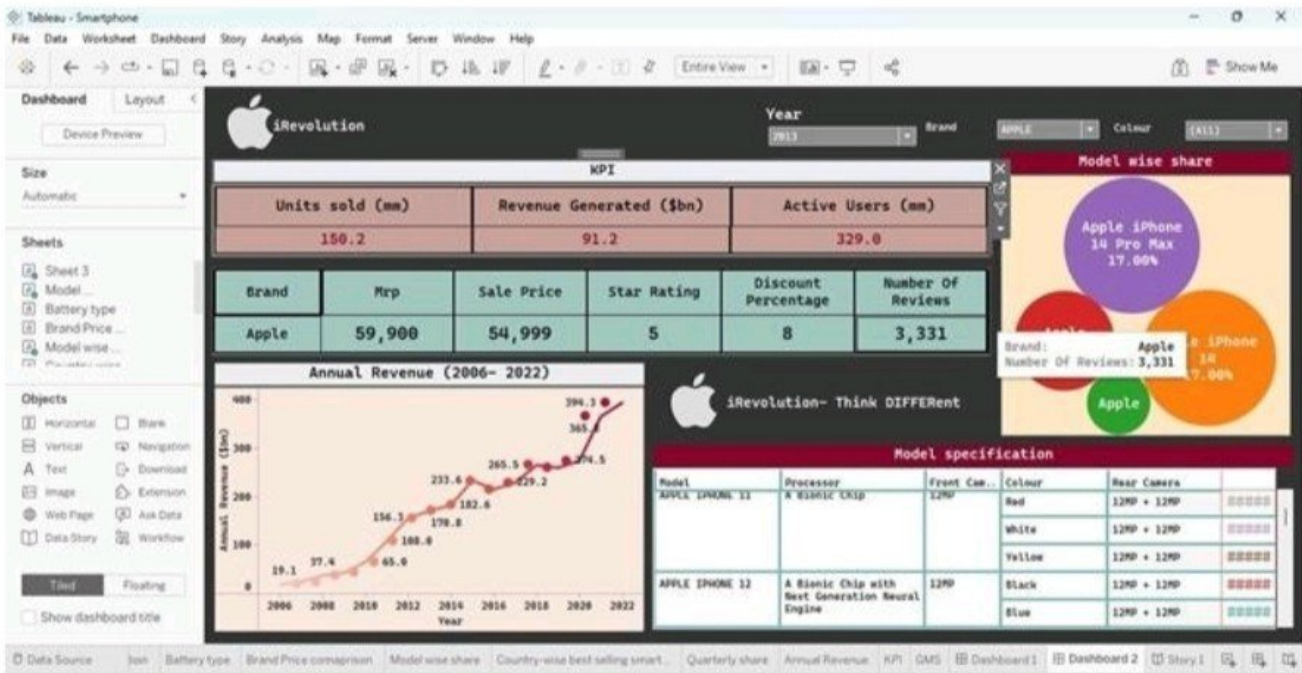
The number of unique visualizations that can be created with a given data set. Some common types of visualization that can be used to analyze the performance and efficiency of a project include bar charts, line charts, heatmaps, scatter plots, pie charts, Maps, etc.

These visualizations can be used to compare performance, track changes over time, and show distribution, and relationships between variables.

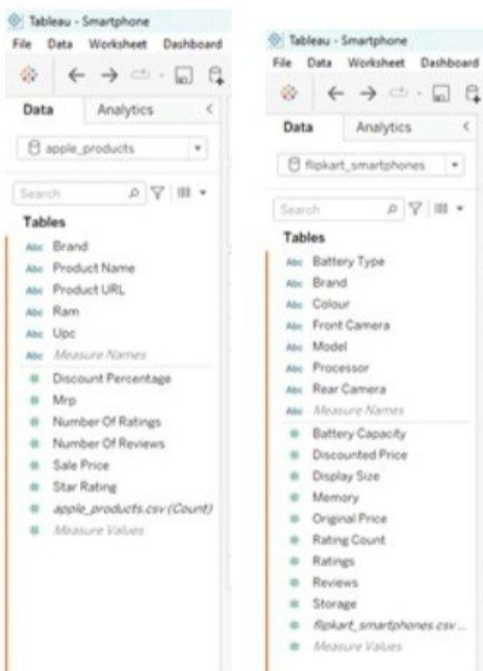
Milestone7:PerformanceTesting

Activity1:UtilizationofFilters





Activity2:NoofCalculation Fields



Activity3:NoofVisualizations/Graphs

- KPI
- ModelSpecification
- Model-Wise share
- Battery-Typedistribution

- Brand-PriceComparison
- Model-Wise ShareofiPhone
- Country-WiseBest-SellingSmartphone
- nnualRevenueYear-Wise
- KPI-2
- GlobalMarketShare

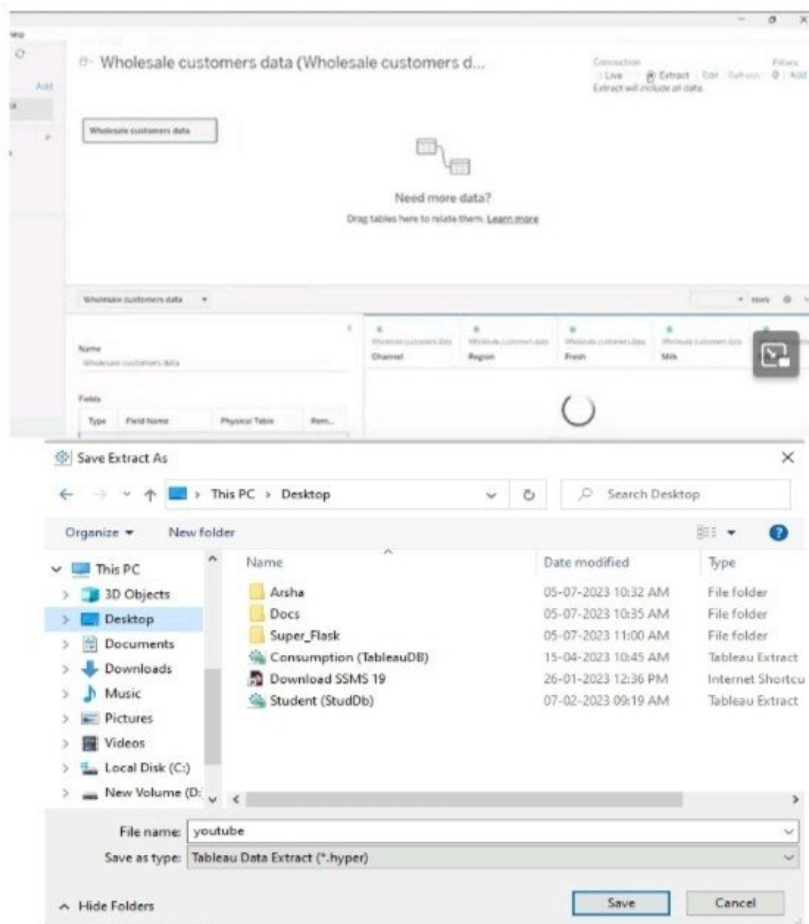
Milestone8:Publishing

Publishing helps us to track and monitor key performance metrics, to communicate results and progress. help a publisher stay informed, make better decisions, and communicate their performance to others.

Publishing dashboard and report to tableau public

Step1 Go to data Source and Select Extract so that .hyper extension files are created and save it at your desktop.

(please wait for pop up of file to save)



Step2: Goto Dashboard/story, click on share button on the top ribbon

Share via Tableau Server or Tableau Cloud

Server:

Quick Connect
Tableau Cloud

Don't have a Tableau Server or Tableau Cloud account? Quickly create a Tableau Cloud site to share your work.

Givetheserveraddressofyourtableaupublicaccountandclickonconnect.


Sign in to https://public.tableau.com

Sign In

☐ Remember me

[FORGOT PASSWORD](#) | [CREATE AN ACCOUNT](#)

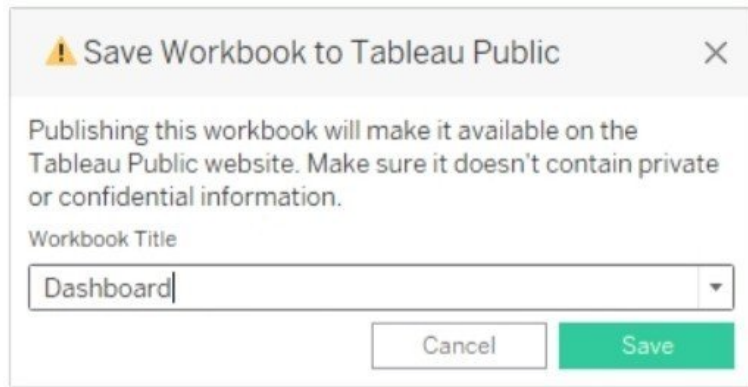
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Next, you'll need to provide a title and description for your workbook. Fill in the appropriate details in the provided field of workbook Title



Click on the "Save" button to start the publishing process. Tableau Desktop will upload your workbook to Tableau Public.

Once the upload is complete, a browser window will automatically open, displaying your published workbook on Tableau Public. Review the workbook to ensure that everything appears as expected.

So in a similar way, we can also publish a Story to Tableau Public.

Milestone9:ProjectDemonstration&Documentation

Belowmentioneddeliverablestobesubmittedalongwithotherdeliverables.

Activity1:RecordexplanationVideoforprojectendtoendsolution

Activity2:ProjectDocumentation-Stepbystepprojectdevelopmentprocedure

Createadocument asperthetemplateprovided.