Google analytics with Bigquery Project

Slide 1: Title Slide

Title: Unlocking the Power of Web Analytics through Advanced BigQuery Techniques

Subtitle: A Deep Dive into Google Analytics 360 Data from the Google Merchandise Store

Slide 2: Introduction

- Title: Overview
- Content: Welcome to a journey of unlocking insights from web analytics using advanced BigQuery techniques

Slide 3: Objectives

Title: Main Objectives

Content

Demonstrate the efficacy of BigQuery for large-scale web analytics

Explore the customer journey and conversion funnel using various BigQuery techniques

Provide actionable insights for enhancing web performance and customer experience

Slide 4: Methods

Title: Tools and Techniques

Content

Accessing Google Analytics 360 data through Google Cloud Platform and BigQuery

Creating interactive dashboards using Google Data Studio

Writing and running SQL queries and Python scripts on BigQuery using Google Colab

Building and evaluating machine learning models on BigQuery with BigQuery ML

Slide 5: Results - Customer Journey

Title: Customer Journey Analysis

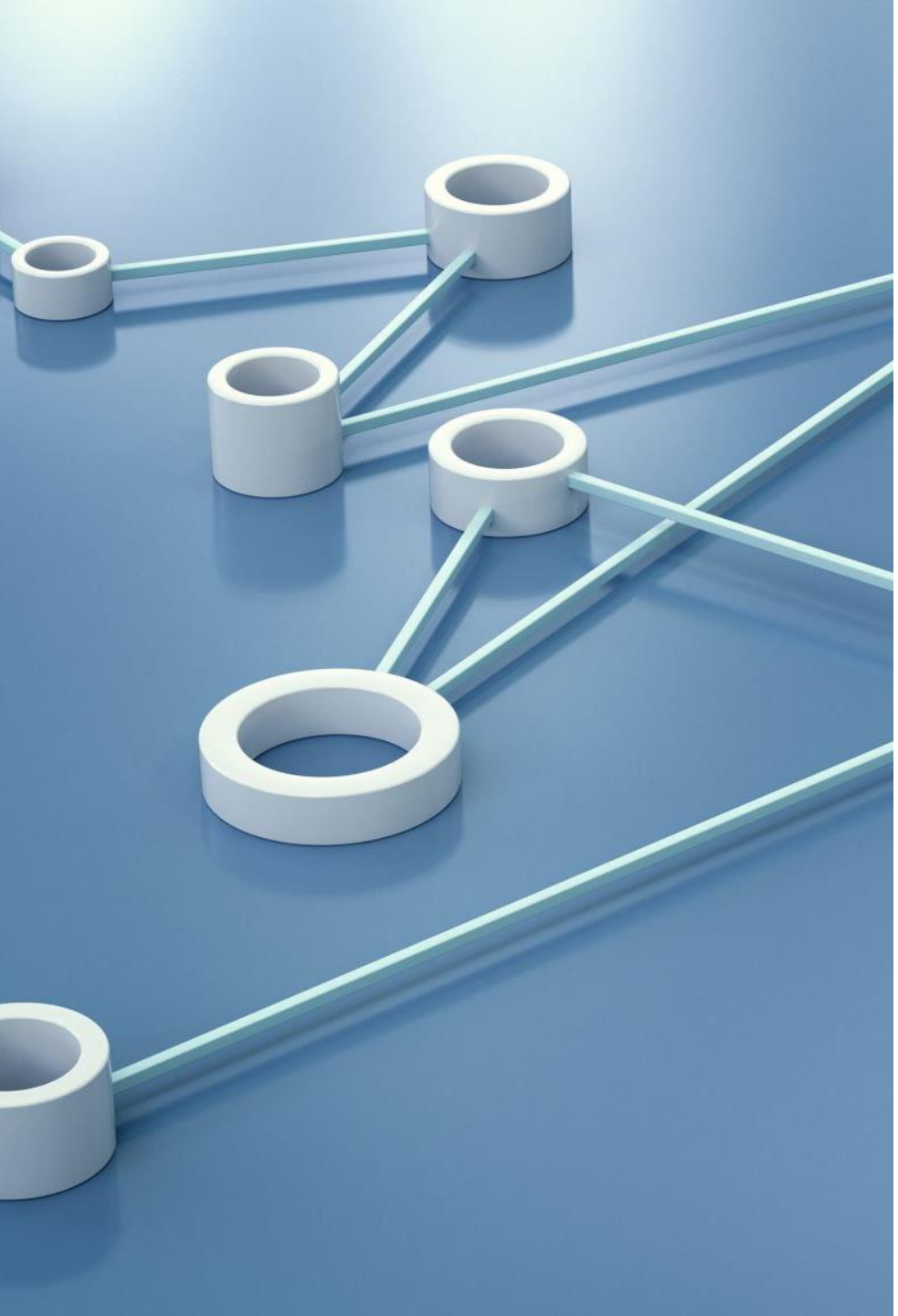
Content

Identification of top traffic sources and channels by device category

Calculation of bounce rate, average session duration, and pages per session for each traffic source and channel

Visualization of visitor flow from different sources and channels to landing and exit pages

Cohort analysis to measure retention rate and revenue per user based on the first visit date



Slide 6: Results - Conversion Funnel

- Title: Conversion Funnel Insights
- Content
- Definition of conversion funnel steps and calculation of conversion rate and drop-off rate
- Analysis of changes over time and by device category
- Visualization of funnel steps and identification of gaps
- Revenue distribution by product category and name

Slide 7: Results - Machine Learning

Title: Machine Learning Models

Content

Creation of a logistic regression model predicting purchase probability

Evaluation of model performance using metrics like accuracy, precision, recall, and ROC AUC

Creation of a k-means clustering model to segment visitors

Analysis of properties and profiles of each cluster with descriptive names

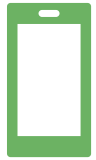
Slide 8: Conclusions

- Title: Summary of Findings
- Content
- Demonstration of BigQuery's role in advanced web analytics
- Insights into the customer journey, conversion funnel, and factors influencing purchase behavior and revenue
- Application of machine learning models for prediction and segmentation

Slide 9: Recommendations

Title: Actionable Recommendations

Content



Optimize the website for mobile devices to address lower conversion rates

Enhance product visibility on home and product list pages

Improve product detail and cart pages for a seamless checkout process

Implement remarketing campaigns and loyalty programs for targeted segments

Slide 10: Limitations and Future Work

Title: Acknowledging Limitations and Future Work

Content

Considerations on limitations with the Google Analytics 360 data set

Suggestions for future work, including more advanced techniques and data sources