Product & Growth Analytics with Google BigQuery

Duration: 3 Days

Description

Product & Growth Analytics with Google BigQuery is a hands-on training program designed to help participants develop fundamental SQL querying skills and make data-driven decisions in product, growth, and marketing processes by analyzing user behavior.

The course covers data querying in the Google BigQuery environment, analysis of user behavior, calculation of growth metrics, conversion funnel analysis, cohort and retention analyses, evaluation of A/B test results, and behavior-based customer segmentation.

Exercises will be carried out using sample data sets and business scenarios suitable for e-commerce, online food ordering, and digital platform business models.

The course aims to enable participants to independently query data on Google BigQuery, derive meaningful insights from user behavior, and use these insights in product development, growth, and marketing strategies.

Delegates will learn how to

- Query data in the Google BigQuery environment
- Analyze user behavior and calculate growth metrics
- Perform conversion funnel, cohort, and retention analyses
- Evaluate A/B test results
- Conduct behavior-based customer segmentation
- Derive meaningful insights from user data
- Use analytical insights in product, growth, and marketing strategies

Audience

- Product management teams
- Growth and Growth Marketing teams
- CRM and marketing teams
- Business analysts
- Product analysts
- Customer experience teams
- Professionals who want to develop their competencies in data analytics

Outline

1. Google BigQuery and SQL Fundamentals

- Introduction to the Google BigQuery environment
- Project, Dataset, Table, and View concepts
- Data types and table structures
- SELECT, WHERE, ORDER BY, and LIMIT
- DISTINCT and NULL value management
- GROUP BY and HAVING
- COUNT, SUM, AVG, MIN, and MAX functions
- Calculating unique users with COUNT DISTINCT
- Conditional analyses with CASE WHEN
- Date and time functions
- BigQuery query costs and fundamental optimization principles

2. Introduction to Advanced Querying Techniques

- Relating multiple data sources
- INNER JOIN and LEFT JOIN
- Subqueries
- Common Table Expressions (CTE)
- Window Functions
- ROW_NUMBER, LAG, and LEAD functions
- Creating user-based event sequences
- Event-based data structures
- Introduction to the use of ARRAY, STRUCT, and UNNEST
- Relating user, session, order, and interaction data

3. Analysis of User Behavior and Growth Metrics

- Product Analytics and Growth Analytics concepts
- Event-based analysis of user behavior
- Measuring user interactions and product usage
- User activation (Activation)
- Daily, weekly, and monthly active users (DAU, WAU, MAU)
- User engagement (Stickiness)
- Analysis of new and existing users
- Order frequency and repeat purchase behavior
- Average order value (AOV)
- Revenue per user (ARPU)
- North Star Metric concept

- Calculating fundamental growth metrics with BigQuery

4. Conversion Funnel Analysis (Funnel Analysis)

- Conversion funnel concept
- Analyzing the user journey
- Creating event-based conversion funnels
- Defining funnel steps and conversion criteria
- Conversion Rate calculations
- Identifying Drop-off Rate and abandonment points
- Analyzing transition times between steps
- Comparing conversion rates by user segment
- Exercise: Analysis of product viewing, adding to cart, payment, and order completion steps

5. Cohort and Retention Analysis

- Cohort Analysis concept
- Grouping users according to their first activation or order dates
- Creating daily, weekly, and monthly cohorts
- D1, D7, and D30 Retention calculations
- Measuring user return rates
- Analysis of repeat ordering behavior
- Churn and user loss indicators
- Creating a Retention Matrix
- Comparing different user cohorts
- Exercise: Analysis of users' repeat ordering behavior after their first order

6. A/B Tests and Analysis of Experiment Results

- Fundamental principles of A/B testing and experiment design
- Creating hypotheses
- Defining control and experiment groups
- Defining success metrics and guardrail metrics (Guardrail Metrics)
- Checking experiment groups in terms of data quality and distribution
- Comparing activation and conversion rates
- Comparing revenue and order metrics
- Absolute Lift and Relative Lift calculations
- Sample size and statistical significance concepts
- Interpreting confidence intervals
- The difference between statistical significance and business significance
- Factors causing incorrect interpretation of experiment results

- Exercise: Evaluating the impact of a product change on activation and revenue

7. Behavior-Based User Segmentation

- User segmentation concept
- Demographic and behavior-based segmentation
- User activity and interaction-based segments
- Order frequency and spending behavior
- RFM (Recency, Frequency, Monetary) analysis
- New, active, loyal, and at-risk users
- Identifying users who abandon their carts
- Identifying users who have not placed an order for a long time
- User segmentation according to campaign interactions
- Creating custom target audiences for marketing campaigns
- Preparing segment-based audience lists in BigQuery
- Privacy and secure use of user data

8. Hands-on Product and Growth Analytics Workshop

- Reviewing a sample digital ordering platform data set
- Querying user behavior
- Calculating fundamental growth metrics
- Creating the conversion funnel
- Identifying user abandonment points
- Cohort-based retention analysis
- Evaluating A/B test results
- Creating a behavior-based target audience for a marketing campaign
- Turning analytical findings into business actions

Prerequisites

Advanced SQL or programming knowledge is not required. The course is designed to start with fundamental SQL queries and is suitable for beginner-level participants.