Analytics Bootcamp

INSTRUCTOR-LED | 1 WEEK | 40 HOURS | ONSITE OR REMOTE

OVERVIEW
Every business area can benefit from better understanding and working with its data to make effective decisions. In this training, participants practice using data to make effective decisions for sales, product, and marketing use cases.

OUTCOMES
- **Level 1 Data Skills:** Wrangle, explore, model, and communicate the results of analyses with Excel, SQL, and Tableau
- Apply your skills to a final analytics project relevant to your business

IDEAL FOR
- Digital marketers who want to improve marketing spend, gain better insights from campaign data
- UX designers and product managers who want to better understand how data around card sorts or website analytics translates to user experience.
- HR manager who want to apply more comprehensive and validated statistical analysis to HR data

PRE-WORK
Based on DA1 pre-assessment results, learners are assigned up to 20 hrs of Analytics Fundamentals online pre-work to prepare for class.

AGENDA

8 hrs
Data Cleaning and Aggregation with Excel
Level-set on the analytics workflow from identifying a business problem through communicating insights and begin building wrangling skills in Excel.

8 hrs
Querying Data with SQL
Learn the benefits of working with data out of databases and continue building wrangling skills in SQL.

8 hrs
Organizing Data with SQL
Deepen your ability to explore data and segment it for analysis.

8 hrs
Exploring Data in Tableau
Begin connecting data across multiple sources and practice data manipulation in Tableau.

8 hrs
Communicating Data in Tableau
Wrap up your learning by building a dashboard to demonstrate your ability to answer key business questions and provide insights through strong and interactive visualizations.
Capstone Project: Conduct and present a full analysis specific to your business

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DAY 1 OVERVIEW
Level-set on the analytics workflow from identifying a business problem through communicating insights and begin building wrangling skills in Excel.

DAY 1 OUTCOMES
- Understand how databases work
- Work through a problem and use logic to conditionally select, clean, and segment data needed to solve it

PRE-WORK
Based on DA1 pre-assessment results, learners are assigned up to 20 hrs of Analytics Fundamentals online pre-work to prepare for class.

DAY 1 AGENDA
2 hrs
The Value of Data and Data Narratives
Level-set on the analytics workflow from identifying a business problem through communicating insights and begin building wrangling skills in Excel.
1.5 hrs
Fundamentals of Data in Excel
Practice asking the right questions of data, and preparing and cleaning a dataset to analyst it against that question.
1.5 hrs
Data Referencing in Excel
Manipulate and build relationships between data and cells in Excel.
1.5 hrs
Data Aggregation in Excel
Summarize and explore data with aggregate functions, PivotTables, and conditional formatting.
1 hr
Final Project Context
Discuss final project deliverables and provide in-class time to workshop and refine their final project deliverables.

Analytics Bootcamp | Day 2

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DAY 2 OVERVIEW
As we dive into working with bigger datasets, students need to learn to query with SQL to properly obtain and prepare their data.

DAY 2 OUTCOMES
- Understand how databases work
- Work through a problem and use logic to conditionally select, clean, and segment data needed to solve it

PRE-WORK
Based on DA1 pre-assessment results, learners are assigned up to 20 hrs of Analytics Fundamentals online pre-work to prepare for class.

DAY 2 AGENDA
2 hrs
Databases
Understand how databases work
Set up a database on your computer
2 hrs
Querying Data
Understand how agile wrangling supports deeper analyses
Work through a sales database to query and connect data to complete an analysis
2 hrs
Aggregating Data in SQL
Develop segmented views and calculations to dive deeper on your sales analysis
2 hr
Cleaning and Segmenting Data in SQL
Deal with nulls and use cases to improve the accuracy and segmenting of your sales analysis

Analytics Bootcamp | Day 3

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DAY 3 OVERVIEW
While querying data is useful, joining different datasets unleashes the potential of our analyses.

DAY 3 OUTCOMES
- Combine and clean data
- Work through the same problem and use logic and subqueries to summarize and analyze data

PRE-WORK
Based on DA1 pre-assessment results, learners are assigned up to 20 hrs of Analytics Fundamentals online pre-work to prepare for class.

DAY 3 AGENDA
1 hr **Review and recap** Review previous day and provide time to work on and workshop final project with peers and instructors.
2 hrs **Joining Data** Join data across store dataset and sales datasets to continue optimizing your analysis.
2 hrs **Segmenting Data in SQL** Create filters and sub-selections of sales and population data to continue segmenting datasets for analysis.
2 hr **Functions in SQL** Apply string, math, and date functions to perform a summary analysis of the sales dataset.

Analytics Bootcamp | Day 4

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DAY 4 OVERVIEW
The more complex the data, the more nuanced our visualization techniques and tools must be.

DAY 4 OUTCOMES
- Develop heat maps and other advanced visualizations to derive deeper insights from data
- Conduct a Twitter sentiment analysis

PRE-WORK
Based on DA1 pre-assessment results, learners are assigned up to 20 hrs of Analytics Fundamentals online pre-work to prepare for class.

DAY 4 AGENDA
1 hr   **Review and recap**   Review previous day and provide time to work on and workshop final project with peers and instructors.
2 hrs   **Fundamentals of Tableau**   Join data across datasets and begin building visualizations to analyze user and geographic data in a bikeshare program
2 hrs   **Visualization and Text Manipulation**   Dig in on advanced visualization techniques and an introduction to text data manipulation and interpretation
2 hr   **Social Media Analysis**   Conduct a sentiment analysis on Twitter web data

Analytics Bootcamp | Day 5

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DAY 5 OVERVIEW
As we dive into working with bigger datasets, students need to learn to query with SQL to properly obtain and prepare their data.

DAY 5 OUTCOMES
- Create calculated fields to analyze data
- Develop dashboards to address ongoing analytics questions

PRE-WORK
Based on DA1 pre-assessment results, learners are assigned up to 20 hrs of Analytics Fundamentals online pre-work to prepare for class.

DAY 5 AGENDA
1 hr
Review and recap
Review previous day and provide time to work on and workshop final project with peers and instructors.
2 hrs
Calculations and Analysis in Tableau
Practice Tableau calculations and visualizations to effectively communicate which product categories are over and underperforming
2 hrs
Dashboard Actions and Analysis in Tableau
Practice building dashboards using cell phone metadata that allow users to explore the data on their own
2 hr
Statistical Analysis in Tableau
Practice conducting statistical analyses on either:
• Call center data to measure effectiveness and efficiency of call center agents
• Superstore data to develop a correlation coefficient analysis of subcategory sales versus profit segmented by region