



Data Fluency Accelerator

Detailed Course Description

Online Programme: launches January 27th, 2020



Analytics is no longer a nice-to-have capability...but rather an absolute must-have for any HR executive who wants to provide a positive impact to the business and its employees and ultimately to build a 21st-century HR function

- [FastCompany](#)

Mercer has teamed up with General Assembly (GA), an award winning education company that offers training in today's in-demand digital fields to launch powerful learning programmes for HR leaders, managers and professionals in 2020.

Boost your data analytic skills with our [Data Fluency Accelerator](#).

Become more fluent in the essential skills required in today's workplace.
Arm yourself with the digital mindsets, terminology and workflows that drive today's economy.
Support your team's goals with data-driven insights and data analysis techniques.



Data Fluency Accelerator

ON DEMAND | NO PREREQUISITES

Data Fluency Accelerator

Learn the essential skills to make data-driven decisions.

Part 1: self-led, mentor-supported, online programme over ~12 weeks

Part 2: 1-day, instructor-led workshop in London

OVERVIEW

A comprehensive foundation that equips students with the context, process, and tools to identify and communicate data-driven insights using Excel and SQL.

IDEAL FOR

- HR teams looking to identify talent insights.

FEATURES

- ✓ World-class curriculum.
- ✓ Assessment and personal score report.
- ✓ Project-led experience.
- ✓ Letter of completion.
- ✓ Access anywhere, anytime.

TIMING

Estimated 29–44-hour program:

- 16 hours, 15-minutes of course content.
- 30-minute assessment.
- 2.5 hours of mentor sessions.
- 10–20 hours of project work.

PART 1 CURRICULUM

5 Units | 38 Lessons

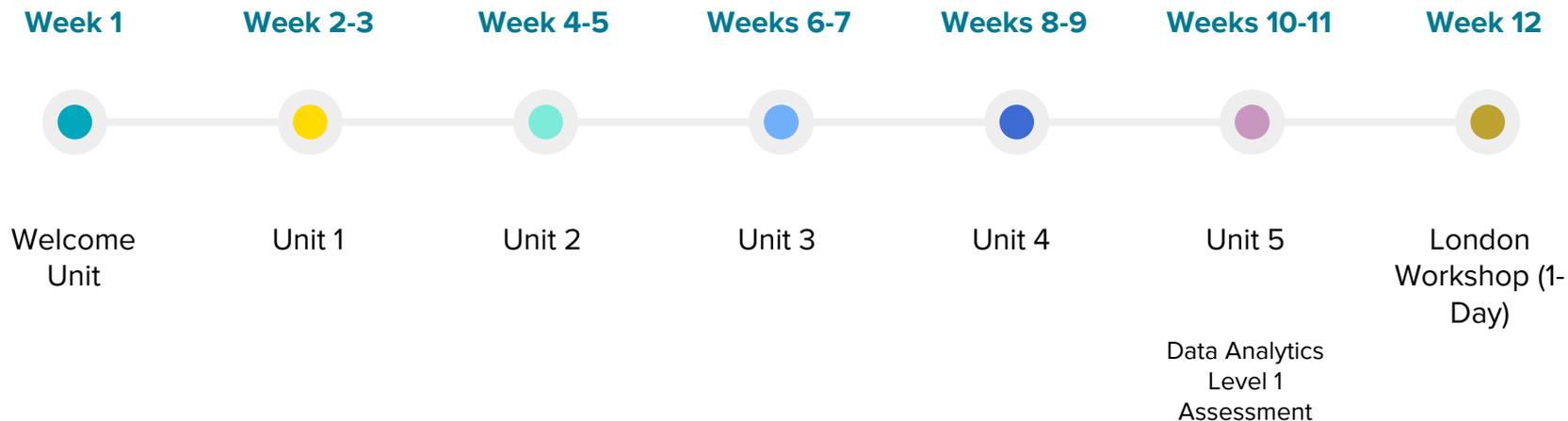
- 1. Data Wrangling:** Data analysis framework, finding the right data, identifying and handling problematic data, harnessing the power of functions.
- 2. Exploring Data:** Data profiling, creating tables, charting and visualizing data, logical functions.
- 3. Interpreting Data:** Statistical thinking and design, interpreting data with PivotTables, measuring the relationship between variables.
- 4. Communicate Insights:** Telling a good story, designing effective visualizations, planning and building dashboards.
- 5. SQL:** Exploring data with queries, refining searches, modifying text query results, null values, aggregation, joining tables.

ASSESSMENT

20 Questions; 30-Minute Time Limit

- Data Analytics Level 1 (DA1) assessment.

Your Learning Journey



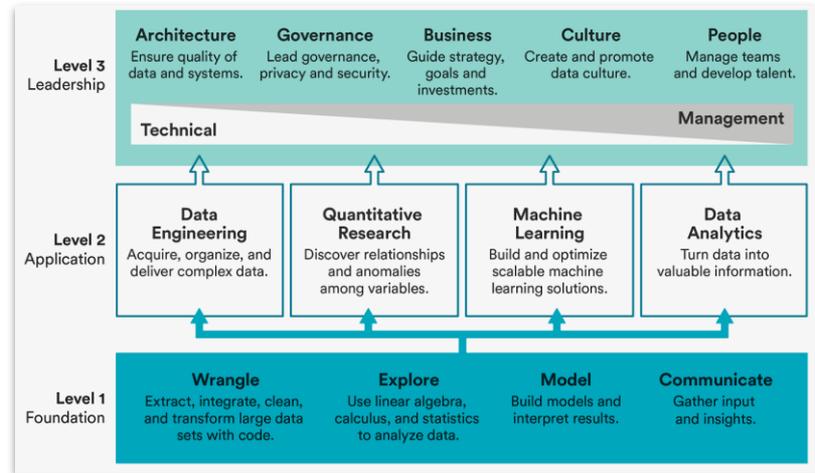
Interactive Content Reflects Cutting-Edge Industry Research

Data Fluency Accelerator content reflects the latest industry research and frameworks developed by GA's Data Science Standards Board, and includes multiple ways for participants to learn:

- **Project-based** learning.
- **Knowledge checks** to reinforce key concepts.
- **Interactive content types** such as flashcards to engage learners.
- **Videos** with transcripts to bring concepts to life.

Data Career Framework

Reflects the latest industry research.



Projects Provide an Opportunity for Application of Knowledge and Practice

Each of the five units in the learning path includes a project lesson to guide students through the content they've learned in previous lessons.

Students can select from one of three project options or choose their own.

5 / 15

Project Options

Scenario 1: Citi Bike	Scenario 2: Superstore
Scenario 3: Verizon	Scenario 4: Choose Your Own

A screenshot of a digital interface titled 'Project Options' showing four selectable scenarios. A yellow oval highlights 'Scenario 1: Citi Bike', and a yellow arrow points from it to a callout box. The callout box contains detailed text about Citi Bike and a question for student input. A blue arrow points from the text on the left towards the interface.

Scenario 1: Citi Bike

Citi Bike is New York City's bikeshare company, providing widespread access to temporary bicycle rentals throughout the five boroughs. Riders check out a bike at one station and "dock" the bike at another. Subscribers pay for annual passes to take a bike at any time; customers are more casual riders and pay for one- or three-day passes.

Citi Bike wants to explore how it might better cater to subscriber and customer needs. For instance, when it comes to improving bike availability, do certain stations require more bikes at certain times of the day? Or, do certain types of riders tend to take longer trips? And, if so, should Citi Bike explore offering a lightweight bicycle model?

Can you help?

Project Prompts Provide Real-World Challenges and Result in a Final Portfolio Project

Project Toolkit Examples

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Can you help?

Scenario 2: Superstore

Superstore is America's leading bulk office supplier.

Superstore has employed the same four salespeople (one per region) for the past three years, and while sales have steadily increased, profit margins have not followed suit.

You are Superstore's newest business analyst brought on to examine the sales data and uncover potential patterns that have led to lower profit margins.

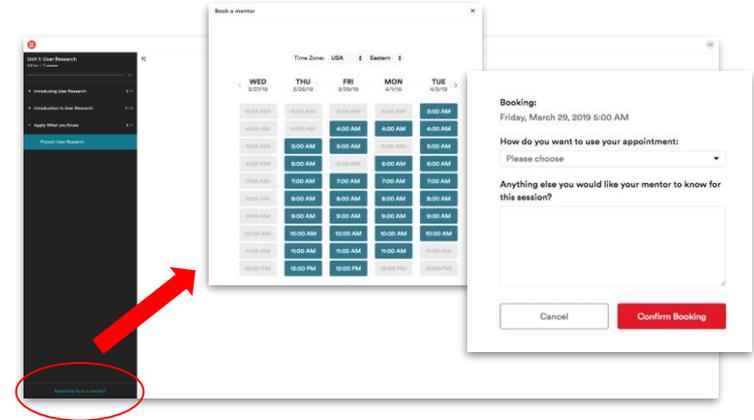
Access to Expert Mentors to Guide Your Team Through the Course

Experts available at students' fingertips to:

- Help with a concept.
- Answer a question.
- Review project feedback.
- Chat about anything on the student's mind.



Students can book mentor sessions directly within the platform.



Data Analysis is Level 1 (DA1) Assessment Packaged With Learning Content

DATA ANALYSIS LEVEL 1
20 questions | 30 Minute Time Limit

The Data Analysis Level 1 (DA1) assessment will test your proficiency across three topics: Databases, Spreadsheets, Statistics. The DA1 uses five stages of data analysis: Frame, Analyze, Communicate, Prepare, and Interpret.

Important Rules

We recommend using a **computer or laptop** to take your assessment.

Certified Marketer Level 1
95 Percent | 45 questions

Consumer/Customer Insights 0/12

Question 1 ✓

Question 2 ✓

Question 3 ✓

Question 4 ✓

Question 5 ✓

Question 6

Question 7

Question 8

Creative 0/12

Question 6

You are branding a new line of baby toys and have questions about your competitors and target customers. From where should you collect data to best answer each question? (Click and drag items next to their matching questions.)

Drag and drop the following items.

Focus groups Customer surveys Personal research of media from competitors

A web analytics tool Reports from research organizations

What are the revenues of top brands? What are the unique selling propositions of top brands?

What are the product attributes that appeal to the most customers? How do customers feel about existing baby toys?

What are the main ways customers currently reach your website?

Save & Continue

CERTIFIED MARKETER LEVEL 1

Jean Kelly Submitted January 9, 2018

OVERALL SCORE: **26 / 45** YOUR SCORE: 58%

Performance by Skill

CALCULATE (1/10) 64%

Combine data to determine results.

CHANNELS AND EXECUTION (1/10) 67%

Getting your message to the market.

CONCEPTUALIZE (1/10) 100%

Understand and learn concepts in marketing.

CONSUMER-CUSTOMER INSIGHT (1/10) 100%

Understanding and analyzing for consumer/customer needs.

CREATIVE (1/10) 100%

Bringing concepts/messages to life.

INTERPRET (1/10) 67%

Draw conclusions from data to make decisions.

MARKETING TECHNOLOGY (1/10) 100%

Understanding the range and use of marketing.

MEASUREMENT AND ANALYTICS (1/10) 100%

Measuring and optimizing performance.

Go to Coursework

What It Is:

Access to GA's industry standard assessments (\$200 value) included with the course.

Students Get:

- Assessment
- Personal score report





Welcome to Data Analysis

Welcome to Data Analysis

Welcome to Data Analysis

Get Started in Data Analysis

Overview

With so much data generated every day, analytical skills have become critical in the modern economy, whether you work directly with data or manage those who do. In this course, learners will explore the framework analysts use to draw confident conclusions from data, and learn how to use Excel and SQL to make critical business decisions.

By the end of the learning path, participants will be able to:

- Use Excel and SQL to collect, clean, and analyze large data sets.
- Present data-driven insights to key stakeholders using data visualization and dashboards.
- Tell compelling stories with data.





Unit 1: Data Wrangling

Data Wrangling

Introducing Data Wrangling

The Data Framework

Finding the Right Data

Cleaning Your Data

Organizing Data With Functions

Project

Write a specific problem statement and a clear hypothesis. Use common sources to find potential data sets for analysis, evaluate if they can be leveraged to answer a question, and spot check and clean them using common features and functions in Excel.

Overview

Analysts spend a vast majority of their time finding and handling dirty data. In this unit, learners get started with the essentials of data wrangling — i.e., the process of finding, sifting through, cleansing, and transforming data so it can be used to answer business questions.

By the end of the sprint, participants will be able to:

- Describe the Data Framework, and how it's used by analysts.
- Write a specific and testable question given a scenario.
- Evaluate data sets and their variables.
- Determine if a data set can be used to solve a business problem.
- Use Excel's Filter feature to spot check for problematic data.
- Handle missing data based on industry norms.
- Use conditional formatting to identify duplicates and extreme values within a data set.
- Use Excel's Find and Replace feature to fix easily identifiable issues/errors.
- Select a data cleaning strategy based on a given scenario.
- Learn to use and distinguish between VLOOKUP, HLOOKUP, and INDEX MATCH.





Unit 2: Exploring Data

Exploring Data

Introducing Exploring Data

Data Profiling

Creating PivotTables for Exploratory Analysis

Exploring Relationships Through Data Visualization

Probing Data With Logical Functions

Project

Use aggregate functions, summary statistics, and histograms to understand a data set. Make a PivotTable to explore data, choose the appropriate visualization for an analytical output, and select a logical function to ask a complex question of data.

Overview

Once you've cleaned your data set, it's time to explore it. At this point, analysts start asking broad questions of their data like, "What happened?" and "Why do we think this happened?" In this unit, participants will learn how to use PivotTables and statistics to discover more about what your data is saying.

By the end of the sprint, participants will be able to:

- Use summary statistics to understand a data set.
- Create a histogram and use it to explain the distribution of data.
- Apply aggregate functions to describe a data set.
- Create a table and understand how it can be useful.
- Make, format, and update a PivotTable in accordance with best practices.
- Conduct an exploratory data analysis using tables.
- Select the appropriate visualization for an analytical output.
- Create the four most common types of charts and interpret their results.
- Build logical functions using IF AND OR to ask complex questions of data.



Unit 3: Interpreting Data

Interpreting Data

Introducing Interpreting Data

Statistical Thinking and Design

Interpreting Data Using PivotTables

Measuring Relationships Between Variables

Project

Use correlation to measure interdependence between variables. Create a regression model to predict an output (given a certain input) and describe R-squared and how it relates to the regression line.

Overview

Analysts use statistics to determine the significance of what their data is saying, whether they can confidently predict outcomes with it, and to what level of certainty. In this unit, learners will discover how interpreting data can lead to actionable insights businesses need to succeed.

By the end of the sprint, participants will be able to:

- Recognize and avoid common data collection pitfalls and biases.
- Critique the survey and experiment design of a given scenario.
- Group PivotTable data for improved readability and analysis.
- Use “Show Value As” to quickly perform calculations on PivotTable data.
- Use correlation to measure interdependence between variables.
- Describe predictive statistics and how they are used.
- Create a regression and use it to predict an output (given a certain input).
- Describe R-squared and how it relates to the regression line.





Unit 4: Communicating Insights

Communicating Insights

Introducing Communicating Insights

Storytelling With Data

Designing Effective Visualizations

Beyond Basic Charts: Bubble Plots and Heat Maps

Planning Dashboards: Data for Everyone

Project

Scope out the strategy and story of your presentation, apply color theory and Tufte's rules to visualizations, and plan a dashboard according to best practices.

Overview

Insights gleaned from data don't serve much of a purpose if no one can understand them. In this unit, participants will learn how to communicate clear, succinct, and meaningful data stories.

By the end of the sprint, participants will be able to:

- Explain why narratives are an important element of data analysis.
- Use the presentation canvas to plan your presentation.
- Explain Tufte's rules for good data visualization.
- Describe the three properties of color and how they convey meaning in data visualizations.
- Apply color theory and Tufte's rules to critique charts.
- Define the tenets of an effective dashboard.
- Determine the appropriate dashboard type and visualization based on a scenario.
- Use prioritization to organize and design a dashboard given a scenario.
- Evaluate a dashboard based on a scenario.





Unit 5: SQL

SQL
Introducing SQL
Getting Started With SQL
Exploring SQL Data With Basic Queries
Refining Queries With WHERE Clauses and Conditionals
Modifying Text Queries With String Functions
Handling NULL Values
Using Aggregate Functions to Summarize and Compare Data
Using CASE to Make New Fields
Joining Tables in SQL
Joining Multiple Tables in SQL
Writing SQL Subqueries
Project
Perform a multi-step SQL query and export it to Excel. Use Excel to create calculated fields and PivotTables, analyzing the data to generate insights and a recommendation for your client.

Overview

Every second, consumers generate massive amounts of data that businesses collect and store. But that data is useless unless we can use it to answer questions. Enter Structured Query Language or SQL — the language analysts use to unlock the power of data stored in relational databases.

By the end of the sprint, participants will be able to:

- Explain what databases are and what they can do.
- Explain what SQL is and why analysts and businesses use it.
- Define basic data types in SQL.
- Conduct a simple data-pulling query using SELECT and FROM.
- Refine a query using LIMIT and ORDER BY.
- Properly use “=”, “!=”, “<”, “>”, “>=”, “<=”, “AND”, and “OR” in WHERE clauses.
- Learn four of the most useful string functions: UPPER, CAST/CONCAT, LEN, and REPLACE.
- Describe null values and how they impact a data set, as well as how to handle them.
- Perform calculations in SQL using aggregate functions.
- Use GROUP BY to organize summary information.
- Create new fields based on a set of specified conditions using CASE statements.
- Use JOIN functions to combine data across tables.
- Use multiple JOINS to combine more than two tables.
- Learn to plan out JOIN queries to prevent erroneous results.
- Explain what subqueries are and why analysts use them.
- Distinguish between the three types of subqueries and write your own.



Part 2: Influencing with Data

1 DAY WORKSHOP | LONDON

OVERVIEW

Data's everywhere, but HR managers and leaders often present information and charts without providing real business insight. In this hands-on workshop, build on your technical foundation from the online program to become an effective influencer with data. Learn tried-and-true techniques to frame questions, communicate insights through visuals, and build powerful data-led narratives that compel action from those you seek to influence.

OUTCOMES

- Understand the principles of effective data wrangling, exploration, visualization, and communicating insights
- Evaluate the reports you receive more critically and effectively
- Generate reports with clear insights that compel action
- Apply your skills to a final presentation in class and commit to an action plan to implement your skills back in your role

AGENDA

1.5 hrs

Welcome + Defining a Question for Analysis

Identify and generate effective questions for analytics teams to answer.

1 hr

Obtaining Data

Walk away with a shared understanding of when and why to look at new data for an analysis and loads of inspiration as to how that can impact an analysis.

2 hrs

Exploring Data for Analysis

Learn how to effectively evaluate results that are presented to you by identifying visual “tricks” that skew the perceived results of an analysis, and practicing a line of questioning can deepen the insights of an analysis and lead to actionable next steps.

2.5 hrs

Communicating Insights

Learn a process for communicating insights effectively when revealing your recommendations to your stakeholders.



Learner View on MyGA

The image displays the MyGA learner interface. On the left, a grid of course cards is shown under the heading "DATA ANALYSIS ON DEMAND". The cards include:

- Welcome to Data Analysis** (25 mins | 2 lessons, 0% progress)
- Unit 1: Data Wrangling** (3 hrs | 6 lessons, 17% progress)
- Unit 2: Exploring Data** (2.5 hrs | 6 lessons)
- Unit 3: Interpreting Data** (2.5 hrs | 5 lessons, 0% progress)
- Unit 4: Communicating Insights** (2.5 hrs | 6 lessons, 0% progress)
- Unit 5: SQL** (5 hrs | 12 lessons)
- Wrapping Up Data Analysis** (15 mins | 1 lesson, 0% progress)
- Data Analysis Level 1 Assessment** (30 mins, 0% progress)

In the center, a vertical navigation menu for "Unit 1: Data Wrangling" is visible, listing lessons such as "Introducing Data Wrangling", "Wrangling Data in Excel", "The Data Framework", "Finding the Right Data", "Cleaning Your Data", "Organizing Data with Functions", and "Apply What You Know".

On the right, the lesson page for "The Data Framework" is shown, featuring the instructor David Klein and a red "Resume Lesson" button. A red oval highlights a small, faint icon in the bottom right corner of the page.





Get Ready for the Future of Work

Data Fluency Accelerator

To register your place for the London programme contact
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