DATA ANALYTICS IMMERSIVE

GENERAL ASSEMBLY

OVERVIEW

General Assembly's Data Analytics Immersive (DAI) is a beginning-level course that will prepare you to launch a successful career in one of today's fastest-growing job markets.

Created to transform your career in just 12 weeks, this full-time on campus bootcamp will equip you with the tools and techniques needed to go from novice to expert and develop a data career full of opportunities and growth potential. Once you complete this bootcamp, you'll present potential employers with an impressive resume highlighting your capabilities with the most in-demand tools they are looking for. You'll also have sought-after soft skills that will make you stand out.

Our industry-aligned curriculum prepares you to:

- Manage the entire data analytics workflow.
- Acquire, analyze, and visualize data sets in real time.
- Master industry-standard tools like SQL, Excel, Tableau, PowerBI, and Python.
- Turn data into stories that can influence and inform important decisions.
- Ask the right questions and answer them with data-informed insights.
- Demonstrate what you've learned with a solid professional portfolio.

WHAT TO EXPECT

Pre-Course Learning Paths

To qualify for the DAI, you will need a high school diploma, GED or other equivalent, or a diploma from an institution of higher education recognized by the U.S. Department of Education as well as a strong mathematical foundation and basic familiarity with programming concepts.

The In-Class Experience

Engage in full-time, project-based learning that's designed to inspire a lifetime of discovery. As a DAI student, you'll:

- Explore new concepts and tools through expert-led lectures and discussions.
- Complete hands-on exercises to reinforce newly learned skills.
- Develop fluency in industry-essential topics and techniques via independent, pair, and group labs and real-world client work.
- Receive individualized feedback and support from your expert instructional team.
- Build out a professional portfolio to showcase your job-ready data analytics skills to potential employers and collaborators.

Dedicated Career Coaching

As an Immersive student, you'll receive dedicated support from career coaches who will help you set goals, build connections with employers, and stay on track with your job search. Throughout the course, you'll:

- Get an inside look at the industry through day-in-the-life talks, hiring panel discussions, guest speakers, and more.
- Cultivate a competitive candidate mindset, learning to assess your skill set against job descriptions, track progress, and recognize opportunities.
- Develop your professional brand; polish your online and in-person presence.
- Practice technical challenges and whiteboarding skills to set yourself apart in interviews.
- Tap into an exclusive global network of experts, influencers, and peers, plus learn strategies for leveraging your existing connections, whether in person or online.
- Become an active contributor to the data science community.

After graduation, you'll also gain access to resources to help fuel a lifetime of learning. Dive into new topics or continue honing your data science skills with discounts on a suite of tools, passes and packages to premier events, and more. You can also apply tuition discounts to future GA courses, classes, and workshops, both on campus and online.

*Data Analytics Immersive is run in a Connected Classroom format at all GA campuses except for London.

PREREQUISITES

This is an entry-level course meant for true beginners. Whether you are only starting to realize the potential of data analytics or you can list off the top tools used in this field, we don't expect you to have any foundational elements prior to this other than a desire to learn and a clear line of sight to your future goals.

Our Admissions team can discuss your background and learning goals to advise if this course is a good fit for you.

WHAT YOU'LL LEARN

Unit 1 Responsible Data Analytics

Become an effective inspector, critically scrutinizing datasets for veracity and quality before deciding to use them. You'll understand how to identify reliable data sources, data storytelling, algorithmic bias, and data ethics.

- Identify the possible limitations and quality issues associated with unfamiliar datasets including missing data or unreliable sources.
- Understand the bias that is being introduced into predictive models through training data, choice of model, or evaluation metric.
- Explain the ethical and regulatory issues associated with data acquisition methods.
- Apply a checklist to assess whether the data are likely to be accurate and reliable.
- Qualify issues in a data set and diagnose the type of missing data.
- Apply ethical scraping principles to a given scenario.

Unit 2 Statistics and Mathematics for Data Analytics

Jump into the fundamental statistical and mathematical techniques required for data analytics. Understand descriptive statistics, dependent and independent variables, types of missing data, linear regression, and model validation.

- Identify the difference between key descriptive statistics, including the median and mean.
- Given a scenario, determine whether a simple or complex model should be used.
- Apply the principles of linear regression, including minimizing the sum of squared residuals, and using RMSE as a performance metric.
- Compute appropriate statistics using a variety of tools, including SQL, Excel, Tableau, or Python.
- Choose an appropriate model to solve a given problem; justify the choice of the model used and identify the independent variables.

Unit 3 Data Acquisition and Cleaning With SQL

Develop your SQL skills. You'll complete this unit with an understanding of the benefits of using specialized tools such as SQL for specific stages of the data analytics workflow, over multi-purpose tools such as Excel.

- Know the difference between relational and non-relational databases, and identify the advantages and disadvantages of relational and non-relational databases.
- Apply knowledge of Boolean logic when filtering datasets and SQL syntax,
- and debug queries that produce error messages.
- Apply algorithmic thinking skills to a series of SQL queries given an analytical question.
- Interpret the results and indicate the limitations of the data given a query.

Unit 4 Data Analysis and Interpretation With Excel

Explore and analyze datasets using Excel. Learn to write formulas to perform more complex analyses, build visualizations using lookups to efficiently search datasets and pivot tables.

- Apply syntax and commonly used commands for cleaning, transforming,
- and analyzing data.
- Justify the choice of analysis, given a scenario, and select the appropriate calculations to perform for a given task.
- Select the most appropriate visualizations to effectively communicate results.
- Given a scenario, identify the correct order of steps of the analytics workflow
- to plan and implement a full data analysis.
- Determine whether an unfamiliar dataset requires extensive cleaning or manipulation.

Unit 5 Data Analysis With Tableau and PowerBI

Analyze and visualize data using the dashboarding and business intelligence tools Tableau and PowerBI. Effective visualization and communication with storytelling will be the heart and soul of this unit.

- Tackle every stage of the data analytics workflow, including handling very
- large datasets.
- Identify and apply data visualization tools that can interface with a range of data sources.
- Determine whether exploratory data analysis is required as a precursor to predictive modeling tasks, given a scenario.
- Demonstrate the principles of good data dashboard design.

Unit 6 Data Analysis With Python

Now is the point to enhance your growing skills in data acquisition, analysis, and visualization using Python programming fundamentals, data acquisition with APIs, exploratory data analysis, and simple linear regression.

- Identify the algorithmic thinking skills that are required to break complex questions into smaller steps.
- Indicate how Jupyter Notebook is a useful development environment for data analytics.
- Identify the information that can be gained from Matplotlib, seaborn, or Plotly.
- Determine the significance of certain metrics when performing exploratory data analyses in Pandas.

Unit 7 Data in the Organization

Learn the skills you need to work in an organization, as part of a team of data professionals and nontechnical colleagues. The importance of adhering to regulations, data privacy, and security, will also be emphasized.

- Identify landmark legislation around data governance and privacy, including GDPR and how it applies to roles in an organization.
- Identify the differences between commonly used agile working frameworks, including scrum and kanban.
- Give a technical presentation in which information is presented concisely for a non-technical audience.
- Deploy a Python script on a cloud service to demonstrate that continuous monitoring and analysis is possible.

Unit 8 Capstone Projects

To round out your education, you will apply rigorous data analysis techniques to solve a problem in two projects: a group project and an individual project. Both will require you to collect, clean, and analyze a data set and create a compelling presentation to share your — or your team's — insights.

Unit 9 Career Planning

At the end of the course, you will have personalized job support to help you transition into a Data Analyst role. In sessions held throughout the course, you'll work with dedicated career coaches to help you confidently build a personal brand, apply for jobs, prep for interviews, and tackle technical assessments.

FREQUENTLY ASKED QUESTIONS

Why are data analytics skills relevant today?

Data analyst is one of the most in-demand job roles today. In fact, the World Economic Forum cited it as the second fastest-growing field in the United States. As companies in virtually every industry — from information technology to higher education — harness the power of big data to make decisions, demand for data analysts is skyrocketing.

Will I earn a certificate?

Yes! Upon passing this course, you will receive a signed certificate of completion. Thousands of GA alumni use their course certificate to demonstrate skills to potential employers — including our 19K+ hiring partners — along with their LinkedIn networks. Our programs are well-regarded by many top employers, who contribute to our curriculum and partner with us to train their own teams.

What are the professional backgrounds of data analytics students?

Students come from all walks of life but share one common mission: They are passionate about launching a career in data analytics. We see career-changers from diverse professional backgrounds — for this program, you really need no data analytics experience to get started.

Who is eligible for tuition sponsorship by Tamkeen and GA? And, what does tuition sponsorship cover?

No coding experience is required to apply.

You must be a Bahraini citizen to receive tuition sponsorship.

Tuition sponsorship covers:

- Expert instruction in the skills you need to enter the workforce as a junior full-stack web developer.
- Self-paced pre-work to explore software engineering fundamentals help you hit the ground running on day one of class.
- Robust coursework, including expert-vetted lesson decks, project toolkits, and more.
- A professional-grade portfolio of projects taken from concept to completion — each mirroring real problems that engineers face — that allows you to showcase the breadth of your technical skills to employers.
- Individual feedback and guidance from instructors and TAs during office hours.
- Dedicated career services to help you navigate your personal job search experience, from technical challenges, to salary negotiation, and more.
- Technical interview prep, including resume reviews, mock interviews, and whiteboarding practice.
- A GA course certificate to showcase your new skill set on LinkedIn.
- Dedicated career services to help you navigate your personal job search experience, from technical challenges, to salary negotiation, and more.

- Technical interview prep, including resume reviews, mock interviews, and whiteboarding practice.
- Exclusive access to alumni discounts, networking events, and career workshops.
- A GA course certificate to showcase your new skill set on LinkedIn.
- Connections with a professional network of instructors and peers that lasts well beyond the course. The global GA community can help you navigate and succeed in the field.

What projects will I work on during this course?

For your capstone project, you'll tackle a real-world data problem from end to end. Develop a pitch and problem statement, source and collect relevant data, conduct an exploratory data analysis, and build a predictive model. You'll document and share your findings through a presentation, technical report, and non-technical summary.

Throughout this Immersive, you'll also compile a portfolio of projects designed to reinforce what you've learned in each unit. Gain hands-on experience with statistical and machine learning models, Python programming tools, recommender systems, neural networks, and more.

Where are the GA & Tamkeen courses delivered?

The GA and Tamkeen courses are delivered in person at the Bahrain Institute of Banking and Finance (BIBF).

TAKE THE NEXT STEP

Have questions about our Data Analytics Immersive course? Our Admissions team is here to help and can advise on if this program is right for you and your learning goals. You can also:

- Apply for the course HERE
- Explore upcoming classes and workshops

**Course modality options vary by location, pending market availability. Please contact our Admissions team to discuss what version is available in your location.*