CAREERFOUNDRY

Data Analytics Program

with your Bildungsgutschein

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Program details overview

	Full-time program	Part-time program
Program number (Maßnahmenummer)	962/777/2024	962 / 385 / 2025
Period of validity of the program	19.12.2023 - 10.11.2025	19.12.2023 - 10.11.2025
Occupational identification number (Berufskennzahl)	43103	43103
Job market outlook for Data Analysts* *statistik.arbeitsagentur.de (Engpassanalyse)	Average time to find a job: 64 days Average salary development: +8,2% Jobseeker-to-Job ratio: 0,8 **Good job integration outlook (signs of labor shortage)**	
Program duration	7,6 months / 31 weeks / 153 working days / 1221 hours	15,3 months / 61 weeks / 305 working days / 1221 hours
Weekly working hours	40 working hours	20 working hours
Program language	English or German	
Program location	Online only	Online only
Start dates	Every two weeks, always on a Monday (if the Monday falls on a public holiday, the course will start on Tuesday). See start dates.	
Total number of projects	8	
Mentor model	1-1 Mentor (calls) and Tutor (unlimited messaging)	
Job Support	Job Preparation Course and 1-1 Career Services	
Laptop provided	Yes	
Internship	No	

1. General information about our certification for a Bildungsgutschein

All providers who wish to offer courses with an educational voucher (Bildungsgutschein) on behalf of the Agentur für Arbeit/Jobcenter (employment agency) must first undergo a rigorous certification process in order to check the quality of the courses offered. Only then are they included in the Agentur für Arbeit's official list of course providers (New Plan).

CareerFoundry has successfully completed this process in accordance with the guidelines set out by AZAV (Akkreditierungs- und Zulassungsverordnung Arbeitsförderung—Accreditation and Licensing Regulation for Employment Promotion), and, as a DEKRA-certified educational provider, is permitted to accept educational vouchers in accordance with AZAV since 2016.

2. What is a Bildungsgutschein?

A Bildungsgutschein is an educational voucher provided by the Agentur für Arbeit/Job Center to registered German residents who are unemployed or soon to be unemployed. The Bildungsgutschein pays for the recipient to complete further educational training that will help them get back into the workforce.

3. How do I know if I'm eligible for a Bildungsgutschein?

To be eligible for a Bildungsgutschein, you must be resident in Germany and have completed the official registration process ("Anmeldung") where you register your address at your local "Bürgeramt". Aside from that, you may be eligible for a Bildungsgutschein if:

- You are currently unemployed
- You are currently employed but facing the prospect of unemployment
- You require further training in order to ensure job security in your current employment
- You require further training in order to make up for a "missing" qualification which is relevant to your line of work

To check your individual requirements for a Bildungsgutschein, you can request an appointment at the Agentur für Arbeit/Jobcenter by calling (toll free) 0800 4 555500, by using the Agentur für Arbeit's contact form, or visiting your local Agentur für Arbeit/ Jobcenter. You will be assigned a contact person (advisor) who will assess your eligibility for a Bildungsgutschein.

It's important to note that the Bildungsgutschein is not a guaranteed benefit; the Agentur für Arbeit/Jobcenter is not obligated to grant one to all applicants. Also note that only the Agentur für Arbeit/Jobcenter advisors can determine your eligibility; CareerFoundry has no influence on this.

4. How to prepare for your appointment at the Agentur für Arbeit/Jobcenter

In addition to demonstrating your motivation and the value of the CareerFoundry program in helping you find a job, you'll need to bring and/or demonstrate:

- Proof that you are registered in Germany (Anmeldebescheinigung).
- Your up-to-date CV, ideally showing the connection between your professional background and the program you are going to take.
- Personalized course proposal (request this from us).
- This application guide (view here in German).
- List of relevant job ads within the Data Analytics field to show the strong demand for the skills you will learn in the program—you can take along some screenshots from Monster, Xing, Indeed, LinkedIn or StartupJobs — to name a few).
- If you don't speak German, it is advisable to bring someone along with you who can translate during the appointment.
- Emphasize that you will have access to a dedicated Job Preparation Course, it will provide all the guidance you need to refine your application packet, fine-tune your interview skills, and land that first Data Analyst job. If you complete the Job Preparation Course, you'll also receive the support of a dedicated career specialist for up to six months after graduation.

5. I've received a Bildungsgutschein. What's next?

Once you receive your Bildungsgutschein, please contact us at bildungsgutschein@careerfoundry.com to start your course admission process. Please note that this process can take up to 14 days. The admission process consists of several steps:

- Send us a copy of the Bildungsgutschein—we will need to check in advance whether all the details are correct
- Complete a profile survey—this helps us to get to know you better and assess your suitability for the program
- Read and sign the Terms of Participation—this includes all the information and rules of the course and explains how our collaboration with the Agentur für Arbeit/Jobcenter works
- Complete an admissions test—this is designed to help you and us to ensure that all program requirements have been properly understood and that you know what to expect
- Complete an English test; the minimum required level of English is B1.2

6. Who is the program for and what are the requirements?

This program is for complete beginners who'd like to learn the skills needed to become a job-readyData Analyst—no prior knowledge or experience is required!

The program is also suitable for complete career changers, as well as upskillers who need Data Analytics skills in their current role, or if they're hoping to go freelance.

7. Which tools will you use in the program?

Microsoft Excel

You'll use this tool for statistical evaluations and data visualizations

Tableau

You'll use this tool for statistical evaluations and data visualization

Python

You'll use this tool for advanced data analysis using libraries such as Pandas and NumPy, as well as visualization libraries for data dashboarding

Anaconda and Jupyter

You'll use this tool for writing your Python scripts

PostgreSQL

You'll use this tool for data querying and analysis

GitHub

You'll use this tool for for hosting your code and your analysis project work

GeoPandas

You'll use this tool to add specific locations to your data set to analyze your project

What are the costs associated for tools?

All tooling for this program is free to use, apart from Microsoft Excel, where you can get a free one-month trial through the Intro to Data Analytics Course. After the month trial, you'll be able to purchase one month only (as opposed to a full subscription) in order to continue on and complete the first Achievement in the Data Immersion Course

Note: You will be required to invest some independent study time (approximately 1-2 hours per week) towards familiarizing yourself with the tools you'll use throughout the program, and learning how to use them.

Systemanforderungen:

- Operating system: Windows 10, macOS versions 10.13 and later, Ubuntu, Debian, CentOS, or Fedora (Linux)
- Contact us for more information on system requirements for your operating system

8. How does the program work?

The program provides a **100% online, asynchronous** learning experience—so while there is an overall completion deadline, you get to decide how to fit your study hours around other obligations. You'll be working through the program material in your own personal account on the CareerFoundry platform.

The program is broken into several larger modules called **"Achievements"** which are made up of smaller lessons. Each lesson is made up of reading material, videos, tutorials, a quiz, and a task—where you'll put your learning directly into practice. Each task will contribute to the **final projects** and deliverables that you'll finish the program with.

While there is **no final exam**, you'll have a dedicated **tutor** and a professional **mentor** (assigned based on your timezone) who will assess your submissions against our internal rubric. They'll let you know exactly how to improve your work to get it approved.

The program is counted as complete once all the Achievements have been reviewed and approved by your mentor. You will be able to download your certificate of completion directly from your dashboard. Take a look at a video of CareerFoundry's learning experience or read more on our How it Works Page.

You'll get free read-only access to our other career-change programs (data analytics, digital marketing, UI, and UX design) and after completing this program, will have lifetime access.

9. What kind of support is available?

Tutor

Your tutor is a course expert who actively works in the field and provides individual feedback on your course assignments as you work through an Achievement. You'll communicate with them through the messaging tool in your account.

Mentor

Mentors are seasoned professionals who review the final task in your Achievements and provide detailed video reviews of each project you complete during the course. You'll have video calls with your mentor over the span of the program. You can schedule these calls via our learning platform's built-in calendar tool. Learn more about our mentors and our dual-mentorship model on our .

Student Advisor

Student advisors ensure you have the best possible experience throughout the program. You can message them from your dashboard (within the platform)—they're always happy to answer any questions you have about the administration of your program.

Career Specialist

If you opt into the Job Preparation course, you'll also have a dedicated career specialist who will provide individualized feedback for your job search strategy and application package. Your career specialist will answer all your questions throughout the Job Prep course, and be there to support and advise you on how to get the most out of your job search, both as you work through the program, and beyond as you progress in your career.

Fellow students

As a CareerFoundry student, you'll be part of an extensive community of fellow students, both during the program and after graduation. You can reach out to this community on Slack to discuss your coursework, organize meetups, or find a study buddy.

10. Program Outline

The Data Analytics Program is divided into two parts: Intro to Data Analytics and Data Immersion

Intro to Data Analytics

This course will take you through ten tasks leading up to one main project: a descriptive analysis of a video game data set to inform product development and sale strategies.

Learn to conduct a complete end-to-end analysis of a data set using an industry-standard tool. You'll start by exploring the ins and outs of what data is and how to prepare data sets for analysis before diving into a descriptive analysis. You'll use analytical methods to draw insights from your data, which you'll then present using data visualization and storytelling techniques. By the end of the course, you'll have a complete case study to demonstrate your newly developed analytical skills to clients and employers.

The Intro course will cover the following topics:

1. **Data Analytics in Practice**
2. **Introduction to Excel**
3. **Understanding Your Data Set**
4. **Cleaning Your Data**
5. **Grouping & Summarizing Your Data**
6. **Introduction to Analytical Methods**
7. **Conducting a Descriptive Analysis**
8. **Developing Insights**
9. **Visualizing Data Insights**
10. **Storytelling with Data**

See a more detailed course outline here.

Data Immersion

Immerse yourself into the mindset of a data analyst through hands-on application of the processes and tools that data professionals use every day.

Achievement 1 - Preparing & Analyzing Data

To start, you'll learn how to interpret business requirements to guide your data analysis and will begin developing and designing your data project. You'll review your available data sources for relevancy and address data integrity and quality issues. You'll then integrate your cleaned data into a cohesive data set before diving into some statistics fundamentals, conducting a statistical hypothesis test, and consolidating your findings in a stakeholder report.

Achievement 1 will cover the following topics:

1.1 A Brief History of Data Analytics
1.2 Starting with Requirements
1.3 Designing a Data Research Project
1.4 Sourcing the Right Data
1.5 Data Profiling & Integrity
1.6 Data Quality Measures
1.7 Data Transformation & Integration
1.8 Conducting Statistical Analyses
1.9 Statistical Hypothesis Testing
1.10 Consolidating Analytical Insights

Achievement 2 - Data Visualization & Storytelling

Here, you'll be exploring different types of data visualizations and what they can be used for, as well as how to ensure the visualizations you create are accessible and easily interpretable. You'll also be developing your skills with Tableau, an industry-standard visualization tool. To wrap up, you'll tie your project work together into a data story that you can present.

Achievement 2 will cover the following topics:

- 2.1 Intro to Data Visualization
- 2.2 Visual Design Basics & Tableau
- 2.3 Composition & Comparison Charts
- 2.4 Temporal Visualizations & Forecasting
- 2.5 Statistical Visualizations: Histograms & Box Plots
- 2.6 Statistical Visualizations: Scatterplots & Bubble Charts
- 2.7 Spatial Analysis
- 2.8 Textual Analysis
- 2.9 Storytelling with Data Presentations
- 2.10 Presenting Findings to Stakeholders

Achievement 3 - Databases & SQL for Analysts

Now you'll dive into databases, data storage, and data structures. In this Achievement, you'll develop database-querying skills while mastering SQL. You'll explore how data is structured in a relational database before performing increasingly complex queries against a given database. To finish up, you'll add advanced SQL techniques—such as common table expressions or data extraction—to your toolbox.

Achievement 3 will cover the following topics:

- 3.1 Intro to Relational Databases
- 3.2 Data Storage & Structure
- 3.3 SQL for Data Analysts
- 3.4 Database Querying in SQL
- 3.5 Filtering Data
- 3.6 Summarizing & Cleaning Data in SQL
- 3.7 Joining Tables of Data
- 3.8 Performing Subqueries
- 3.9 Common Table Expressions
- 3.10 Presenting SQL Results

Achievement 4 - Python Fundamentals for Data Analysts

Programming languages help you analyze large, complex data sets. In this Achievement, you'll be studying Python, the go-to language used by data analysts to conduct advanced analyses. You'll set up your environment, learn programming fundamentals, and master pandas, the popular Python library used to perform analytical tasks.

Achievement 4 will cover the following topics:

4.1 Intro to Programming for Data Analysts
4.2 Jupyter Fundamentals & Python Data Types
4.3 Intro to Pandas
4.4 Data Wrangling & Subsetting
4.5 Data Consistency Checks
4.6 Combining & Exporting Data
4.7 Deriving New Variables
4.8 Grouping Data & Aggregating Variables
4.9 Intro to Data Visualization with Python
4.10 Coding Etiquette & Excel Reporting

Achievement 5 - Data Ethics & Applied Analytics

Here, you'll consider the important issues of data bias, data privacy, and data security when working with big data. You'll then dive into data mining and conducting predictive analytics—some of the more advanced tasks you'll be required to complete as an analyst. As you wrap up the Achievement, you'll be introduced to GitHub, and how you can use it to host your portfolio-ready analytics projects.

Achievement 5 will cover the following topics:

5.1 Intro to Big Data
5.2 Data Ethics: Data Bias
5.3 Data Ethics: Security & Privacy
5.4 Intro to Data Mining
5.5 Intro to Predictive Analysis
5.6 Time Series Analysis & Forecasting
5.7 Using GitHub as an Analyst
5.8 Preparing a Data Analytics Portfolio

Achievement 6 - Advanced Analytics & Dashboard Design

In this final Achievement, you'll work on an analysis project using data of your choosing. You'll familiarize yourself with the core visualization libraries used by Python analysts, and create engaging, accessible visuals to form an interactive data dashboard. You'll also continue to build on your advanced analytics skills by taking a dive into machine learning and regression analysis.

Achievement 6 will cover the following topics:

6.1 Sourcing Open Data
6.2 Exploring Relationships
6.3 Geographical Visualizations with Python
6.4 Supervised Machine Learning: Regression
6.5 Unsupervised Machine Learning: Clustering
6.6 Sourcing & Analyzing Time Series Data
6.7 Creating Data Dashboards

Data Visualizations with Python

Achievement 1: Network Visualizations and Natural Language Processing with Python

In the first Achievement, you'll learn how to create network visualizations and identify the relationships between different elements of data. With your Python environment ready, you'll also learn how to appropriately set up your physical and virtual work space for a freelance analyst career, including your web coding environment—JupyterLab. You'll then explore the fundamentals of GitHub and learn some useful basic Git commands, such as cloning repositories, creating push and pull requests, accessing repositories from local devices, and setting up branches.

Along the way, you'll learn how to set up virtual environments in Anaconda and explore some of Python's key functions—apply() and lambda(). You'll then learn about the ethics behind web scraping and how to scrape a web page without an application programming interface (API). You'll also be introduced to text mining and learn how to create bar plots to display your data, before diving deeper into the intricacies of natural language programming and network analysis.

Achievement 1 will cover the following topics:

1. **Intro to Freelance and Python Tools**
2. **Setting up the Python Workspace**
3. **Virtual Environments in Python**
4. **Accessing Web Data with Data Scraping**
6. **Text Mining**
7. **Intro to NLP and Network Analysis**
8. **Creating Network Visualizations**

Achievement 2: Dashboards with Python

In the second Achievement, now familiar with data visualization fundamentals, you'll journey into the intricate functionalities and settings of Python's core visualization libraries. You'll learn how to build dashboards in Python and the advantages of using Python over other visualization tools. You'll then learn how to organize a variety of visualizations on a dashboard to effectively showcase data and present your findings to key stakeholders.

You'll begin by researching different visualization libraries in Python to compare their functionalities and analyze which ones are best suited for your project. You'll then source the data for your visualizations with a combination of API and open source, structured data. You'll use a variety of tools and libraries to create your visualizations, such as Matplotlib, Seaborn, Plotly, and kepler.gl. Once your data

is organized and plotted, you'll use Streamlit to create a dashboard that contains numerous visualizations, including a network visualization, which you learned about in Achievement 1.

Achievement 2 will cover the following topics:

1. **Tools for Creating Dashboards**
2. **Project Planning and Sourcing Web Data with an API**
3. **Fundamentals of Visualization Libraries 1**
4. **Fundamentals of Visualization Libraries 2**
5. **Advanced Geospatial Plotting**
6. **Creating a Python Dashboard**
7. **Refining and Presenting a Dashboard**

11. What kind of projects will you be working on?

Intro to Data Analytics

Project 1: You'll use Excel to analyze data on video game sales to inform the development of new games.

Data Immersion

Project 2: You'll use Excel and Tableau to conduct statistical evaluations and create data visualizations using multiple real world data sets from the health industry, in order to help a medical staffing agency that provides temporary workers to clinics and hospitals on an a -needed basis.

Project 3: You'll use SQL to query and analyze data on online movie rentals. You'll present the results of your queries, relying on the visualization techniques you've learned from the previous Achievements.

Project 4: You'll use Python to analyze data from an online grocery store.

Project 5: You'll use Python visualization libraries to build a data dashboard.

Project 6: You'll work on a big data project exploring the impact of bias and you'll explore some fundamentals of data science—as part of this project you'll also build your portfolio.

Take a look at some examples of projects created by Data Analytics Program graduates on our website.

12. Will you receive a certificate?

You'll finish the program with a certificate of completion and several projects and skills to showcase in your job applications. The certification is in place as an indication of the quality of the program, but in the end, it's the projects and skills that you develop throughout the program that are going to display the quality of your work to future employers and ensure that you find a job.

While the course is not university-accredited, it does undergo a rigorous quality assurance and certification process with the ZFU (Staatliche Zentralstelle für Fernunterricht)—the state body for distance learning in Germany. This process ensures that the course meets a high stand for an excellent and effective learning experience. On successful completion of this certification process, the course is assigned a unique approval number which can be checked against a public register.

13. Finding a job with CareerFoundry

At CareerFoundry, we offer stellar career services for our students which include 1-1 career coaching as you search for your first job (and beyond), an exclusive Job Preparation Course.

Job Preparation Course

Our Job Preparation Course is included in the Data Analytics Program and has been designed to help you with all aspects of finding a job in the field. You'll work with your dedicated career specialist alongside your studies for the second half of the course.

The Job Preparation Course consists of two Achievements, each made up of several tasks.

Achievement 1 - Curation of Your Application Package

Achievement 1 will cover the following topics:

1.1 Crafting Your Mission Statement
1.2 Developing Your Career Change Strategy
1.3 Defining Your Elevator Pitch
1.4 Showcasing Your Process and Skills
1.5 Creating Your Professional Resume
1.6 Building a Professional Portfolio
1.7 Establishing Your Professional Brand

Achievement 2 - Applying for Jobs and Beyond

Achievement 2 will cover the following topics:

2.1 Building Your Network
2.2 Searching for New Jobs
2.3 Applying for Jobs
2.4 Preparing for Interviews
2.5 Planning Your Professional Development

14. What kinds of roles will you be qualified for?

Based on our comprehensive curriculum, you'll be qualified for junior data analytics jobs. If you have transferable skills from your past career, you can potentially get a more senior role—your assigned career specialist will help you to craft the right story with your previous experience to be able to find such a role. Learn more about our graduate outcomes on our Graduate Outcomes page.