**Career Track • Curriculum**

# BI Analyst - Focus Power BI

Qualification for the Job Role
of a **Business Intelligence Analyst**

# Why this course?

Using data to meet business objectives is becoming increasingly important, and is bringing Business Intelligence (BI) and Self-Service BI (SSBI) in particular more and more into the spotlight. SSBI plays a key role in the modern enterprise by providing non-technical departments with the skills and tools for reporting on historical and current data without the help of IT. This uncovers problems and performance potential for optimizing business processes.

To do so, BI and data visualization tools are used for analysis and alternative solution concepts, or requirement models are created based on the results and presented across departments. BI is indispensable if you want to make a lateral move into the tech industry. IT specialists are among the most sought-after professions in Europe across all sectors, and have a wide range of career and development opportunities. Business intelligence in particular is the ideal entry point for you to have the best conditions on the job market over the coming decades and to specialize professionally in other fields such as business or data analytics.

With the help of data modelling, data analysis and data visualization techniques, as a business intelligence analyst, you will uncover trends and patterns in data and help managers and departments make informed business decisions. In addition to analyzing data and creating descriptive reports, your daily tasks as a BI analyst also include interacting and collaborating with all stakeholders and giving presentations on key performance indicators and appropriate solution proposals.

The certified online course to become a BI Analyst - Focus Power BI allows you get started in (self-service) Business Intelligence. You will build up practice-oriented expert knowledge for SQL and relational databases. We will teach you how to get the most out of relational databases and avoid common pitfalls with the latest SQL best practices. You will learn the most important basics for BI with Microsoft Power BI.

Using the best practices of the Power Query Editor as well as advanced use cases, you will create meaningful visualizations, which you will prepare in target group-oriented dashboards and present in an easy-to-understand way with the help of data storytelling. You will complete the online course with a company-relevant final project on flight delays at the Los Angeles International Airport and, on successful completion of the career track, you will qualify for a role as a (Junior) BI Analyst, Business Analyst or an analytical role in a specialist department as a Reporting Analyst.
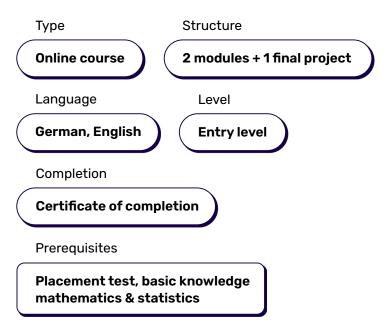
More than **3.000** vacancies are currently being advertised for **BI Analyst** in Germany.

# Course content.

> Using SQL to create data overviews quickly and practically, to write and execute basic and advanced SQL queries

> Advanced knowledge of views, CTEs, subqueries and window functions

> Basics of business intelligence and basic functions of Power BI

> Best practices for data visualization and processing in Power BI

> Best practices in data storytelling

> Basics of KPI calculation with DAX language and statistics

# At a glance.

**Type**

Online course

**Structure**

2 modules + 1 final project

**Language**

German, English

**Level**

Entry level

**Completion**

Certificate of completion

**Prerequisites**

Placement test, basic knowledge mathematics & statistics

**Target group**

The beginners course BI Analyst - Focus Power BI is suitable for anyone who wants to learn Microsoft Power BI as a business intelligence tool and use it professionally. You should have enthusiasm for logical thinking and the visual preparation of results.

This further training is suitable for career changers and is the ideal introduction to Business Intelligence to become a Power BI Analyst or Developer or a Business Intelligence Analyst or Consultant.

# Module overview.

## SQL and relational databases

### Chapter 1: Relational databases

The first chapter introduces you to the topic of **databases**.
You will learn what databases are, where they are used and why.
You will understand how **relational databases** are constructed and familiarize yourself with their **advantages** and **disadvantages**.
You will delve deeper into **ER diagrams** (Entity Relationship Model) and learn how to read them.

You will build your knowledge around the most important SQL terms and locate SQL as the language to communicate with relational databases. You will get an overview of how this interaction works and what SQL can do.

### Chapter 2: Basic SQL

In the second chapter, you will learn how to write **SQL queries** and read relational databases in order to extract company-relevant information. You will distinguish between **data formats** and learn about **Boolean logic** and filter tables with **Boolean operators**.
In the first **practical project**, you will apply the previous learning content and build a **toolkit** to filter, group, sort and **join** data.

### Chapter 3: Advanced SQL

In the third chapter, you will focus on **advanced SQL concepts and techniques** and how to use them to overcome limitations of basic SQL queries. This includes 4 concepts for reusing query results: **subqueries**, **views**, **Common Table Expressions (CTEs)** and **table creation**. In multiple use cases, you will learn advanced filtering and joining methods using nested SQL queries. In addition, you will learn how to accelerate your queries (**indexes**) and apply all the learning content taught so far in the second **practical project**.

### Chapter 4: Analytical functions and excercise project

The final chapter focuses on the **practical project**. You will analyze a completely new database independently - from the first exploration to the last query. For this, we teach you two more important concepts that often come up in everyday work with SQL: you will learn how to optimally use **arithmetic with SQL** and how to calculate with **SELECT**.

You also build up in-depth knowledge of analytical functions in order to create **ranking lists** or calculate **running totals** over longer periods of time. To do so, you determine **statistical parameters** such as correlations, standard deviations and medians, create **window functions** and learn to control various SQL dialects.

# Module overview.

## Analytics and reporting - Focus Power BI

### Chapter 1: Introduction to Power BI

In the first chapter, you will learn why **data-driven decisions** are important and what the workflow of **data analyses** looks like.
You will learn about the most important **basic functions of Microsoft Power BI** - including data, model and report views as well as the filter functions. You will load multiple data sets in the Data View to create a **data model** and your first **report**.

### Chapter 2: Data preparation and data storytelling

In the second chapter, you will learn about **data visualization best practices** and how to modify and format visualizations using hands-on exercises. Power BI offers numerous visualizations that you can use in reports and dashboards.

You will learn how to avoid typical mistakes and get guidelines on how to format graphics in an understandable way. You'll then learn how to use the **Power Query Editor** with **Power BI Desktop** to **process data** and link disparate data sources.

### Chapter 3: Dashboards and data storytelling

In the third chapter, you will learn how to arrange your reports and analyses in **dashboards** and how to communicate them to relevant target groups in an efficient, easy-to-understand way using the most important principles of **data storytelling**.

You will also learn advanced BI skills. You will learn the **basics of Data Analysis Expressions (DAX language)**. You'll learn basic concepts and best practices for incorporating DAX into your reports and learn to write complex DAX code for calculations to generate columns, metrics and tables.

### Chapter 4: Advanced topics

The fourth chapter focuses on **basic concepts of statistics**.
We will provide you with the best practices for valid statistical data analysis. Finally, you'll explore **advanced business intelligence methods** based on statistics and machine learning. At the end, you will be able to use a cross-page **drilldown** and perform an **influence factor analysis** with the help of the **drillthrough**.

# Module overview.

## Module 3

### Final project

In the **final project**, you will apply your previous learning and go through the **entire process of data analysis** - from importing and cleansing data, to analysis and data storytelling. You'll deepen your newly-acquired BI skills by analyzing **air traffic tardiness** at a major hub using real data sets.

You will use SQL and MS Power BI together and investigate and visualize **flight delays at the Los Angeles International Airport**, preparing a results presentation.
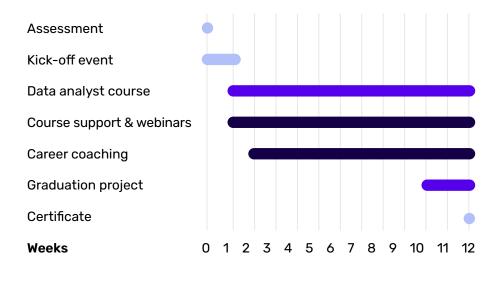
# About StackFuel.

We are your strategic learning partner, suitable for every career level and professional orientation.

Whether you're changing careers, an employee or a manager, our certified and state-supported training courses in data, AI and programming will keep you up to date with the latest technologies.

# Course schedule.

| | |
|---|---|
| Assessment | |
| Kick-off event | |
| Data analyst course | |
| Course support & webinars | |
| Career coaching | |
| Graduation project | |
| Certificate | |
| **Weeks** | 0 1 2 3 4 5 6 7 8 9 10 11 12 |

*Sample course schedule for our Data Analyst course.

- Onboarding & offboarding
- Training contents
- Mentoring & support

# Training philosophy.

### Online & flexible
Do your course part-time or full-time and learn 100% online in your browser on your PC or laptop at home.

### Hands-on practice with real-life projects
In our Data Lab you will write your own algorithms with industrial data sets in interactive exercises and coding challenges.

### Mentoring & career coaching
Your personal mentoring team will accompany you with coaching, feedback, and weekly group webinars.

### Certified & eligible
As a certified training provider, you can get our courses fully subsidized by the job center and the employment agency.

# Facts.

| | | |
|---|---|---|
| **91%** completion rate | **80%** interactive exercises | **20%** expert videos & text lessons |
| **+150.000** learning hours in the Data Lab | **4,3 von 5** recommendation rate | |

# Sponsorship opportunities.

## Installments or part payment

Use our installments or part payment options to spread out the costs of your course over several months so you can remain financially flexible.

## Education voucher

With an education voucher (Bildungsgutschein in German), you can get your course financed up to 100% by the Jobcenter or the Employment Office, if you are currently out of work or looking for employment.

## Training opportunities act

If you are working, you can get your course partially or completely funded by your employer thanks to the Training Opportunities Act (Qualifiyierungschancengesetz in German) - regardless of your qualifications, age or the size of the company.

## StackFuel scholarships

We regularly award various scholarships for our courses, to promote more diversity in the field of data. We want to encourage more people to take an interest in programming, and more women to work in data roles.

# Support & mentoring.

## Coaching

> Assessment
> Final project and evaluation
> 1:1 project feedback consultation
> Official certificate of completion

## Personal mentoring

> Kick-off session
> Webinars with other course participants
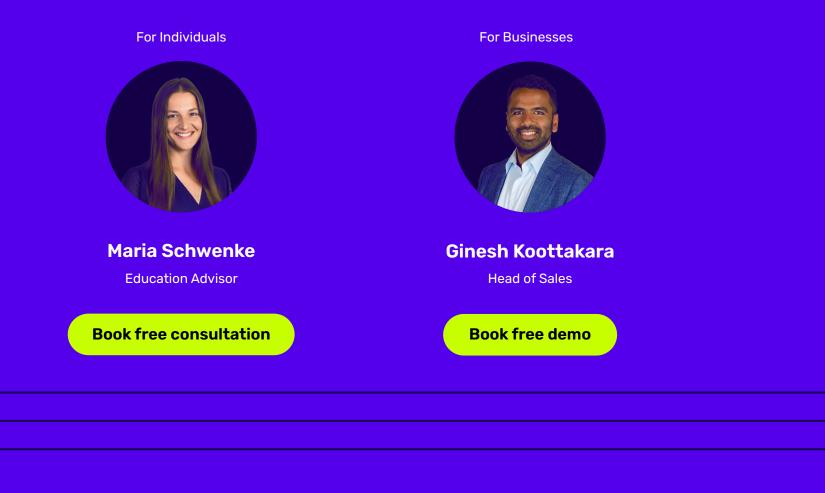> Support via email or phone
> Online forum

## Career services

> CV and application coaching
> Talent pool and career intros
> Data community
> Career events

# Ready to enroll?

## Get in touch with our <u>consultants</u> and build up the <u>skills</u> you need!

### For Individuals

**Maria Schwenke**

Education Advisor

[ Book free consultation ]

### For Businesses

**Ginesh Koottakara**

Head of Sales

[ Book free demo ]