Masterschool

Become a *Data Analyst*

Data Analytics Syllabus

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Career Training

Our 6-month intensive training program will equip you with the essential Data Analyst skill set and get you job-ready. You will learn the fundamentals of Data Analytics, get hands-on experience, and develop a stellar portfolio with real-world projects that are sourced from the world's leading tech companies.

Career Accelerator

After your technical training, you will join the Career Accelerator until you find a job. You will be focusing on searching for a job in data analytics while participating in extensive career workshops and benefiting from one-on-one mentorship sessions, and you will also continue to develop your technical skills and gain more experience.

Endless career growth

Our goal is to ensure that you build an inspiring career. This means that we're here for you even after you've been hired for your first role. As our graduate, you will become a part of our vibrant alumni community, gain access to exclusive events and workshops, and get the undivided support of our team whenever you start thinking about the next step in your career journey.

DA101

Tech Fundamentals

During the first unit of our program, we will lay the groundwork with the fundamentals you will need to succeed in the program. Learn the basics of Python and computer networking. Understand how the internet works, begin to practice algorithmic thinking and complete your first projects. In addition, this unit will teach you time management skills, touch typing, and how to use keyboard shortcuts to control your computer effectively.

Sprint 1   Problem Solving and Algorithmic Thinking

Sprint 2   Programming with Python 1

Sprint 3   Programming with Python 2

Sprint 4   Networking and the Internet

- Python
- Problem Solving
- Algorithmic Thinking
- Time Management

- Touch Typing
- Keyboard Shortcuts
- Networking
- Internet

DA102

Introduction to Data

Let's start from the beginning: What is data? In this course, you will learn how to describe the basic features of a dataset, such as data types and measures of center and spread. Then, you will learn how to clean, analyze and visualize various datasets using spreadsheets. Spreadsheet software like Microsoft Excel and Google Sheets remains one of the top tools for data analytics due to its rich code-free interface and diverse list of functions.

Sprint 1   Descriptive Statistics

Sprint 2   Analytics with Spreadsheets Part 1

Sprint 3   Analytics with Spreadsheets Part 2

Sprint 4   Practice Week

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- Data & Variable Types
- Statistical Notation
- Measures of Center
- Measures of Spread
- Outlier Detection
- Features of Spreadsheets

- Cell Formulas
- Aggregation Functions
- Conditional Functions
- Lookup Functions
- Pivot Tables
- Data Visualization

DA103

Business Analytics

Data in itself is Step 1, but the true value is unlocked when it is applied in the context of a real business problem. In this course, you will be introduced to a number of key business metrics used in sales, finance, marketing, growth, and engagement. You will analyze funnels to optimize business KPIs (Key Performance Indicators), use cohort analysis to make informed product decisions that reduce churn and increase revenue, and finally, map out a business model to evaluate a potential revenue stream from customers.

In addition, you will be introduced to SQL (Structured Query Language), which remains the most efficient way today to extract data. You will code SQL queries to retrieve, combine, and aggregate data. SQL is used in virtually every industry, so get ready to superpower your skillset!

Sprint 1   Business Analytics

Sprint 2   Basic SQL Part 1

Sprint 3   Basic SQL Part 2

Sprint 4   Practice Week

- KPIs
- Understanding the Market
- Business Models
- Customer Lifecycle States
- Customer Lifetime Value
- SQL Query Structure

- Database Types
- Aggregation Functions
- Simple SQL Joins
- Entity Relationship Diagrams
- Subqueries

DA104

Statistics Fundamentals with Python

Probability may be the most fundamental skill you need to acquire if you want to be a successful data analyst. Why? Because probability is about making predictions about future events based on models or causes that we assume. You will then leverage probability in statistics, which we use to analyze data from past events, to infer what the underlying models or causes could be. You will apply your statistical knowledge in A/B testing, which is a prominent research methodology consisting of a randomized experiment to test different user experiences.

Statistical thinking took decades to develop, but computers make it much easier to comprehend today. The third sprint will quickly get you up to speed and help you begin thinking statistically using Python-based tools.

Sprint 1   Probability & Distributions

Sprint 2   A/B Testing Theory

Sprint 3   Statistical Thinking in Python

Sprint 4   Practice Week

- Probability of Events
- Binomial Distribution
- Conditional Probability
- Bayes Rule
- Normal Distribution
- Central Limit Theorem
- Confidence Intervals

- Hypothesis Testing
- Numpy
- Pandas
- Scipy Stats
- DataFrame
- Lambda
- Data Structure

DA105

Data Storytelling

Knowing how to tell a coherent and convincing story when communicating your analysis results is key to your success as a data analyst. In this unit, you will work on your storytelling skills while learning Tableau, a widely-used BI (Business Intelligence) tool. You will also learn the design principles behind good data visualizations. By the end of this course, you will be able to communicate your analysis results in a presentation format and create a beautiful and self-explanatory dashboard.

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Sprint 1   Data Visualization Fundamentals and Introduction to Tableau

Sprint 2   Data Analysis in Tableau

Sprint 3   Data Storytelling

Sprint 4   Practice Week

- Types of Data Visualizations

- Levels of Measurement

- Design Principles

- Visual Encodings

- Tableau Introduction

- Customizing Visualizations

- Trend & Forecast Lines

- Dashboards & Stories

- Problem Statement

- Data Story Types

- Ghost Decks

- Limitations & Biases

DA106

Final Project

This project is where "everything comes together" and you will get a real opportunity to shine, show your newly acquired knowledge and understand how everything connects.

In addition, you will begin preparing for your job search. Career Preparation Week is all about crafting your resume or CV (Curriculum Vitae), making effective use of LinkedIn, and personal pitch workshops. This will enable you to start building your network early and scope out jobs ahead of the Career Accelerator.

Sprint 1   Final Project

Sprint 2   Final Project

Sprint 3   Career Preparation Week

Sprint 4   Vacation Week

Career acceleration to land your first Data Analytics role, and beyond.

During the Career Accelerator, you will be actively looking for your first full-time Data Analytics role. You will be learning everything you need to know about how to get hired for your dream job at a top tech company, while continuing to develop your technical and soft skills. Our goal here is to make you the ideal candidate for the role you are after, and to help you start your career as early as possible.
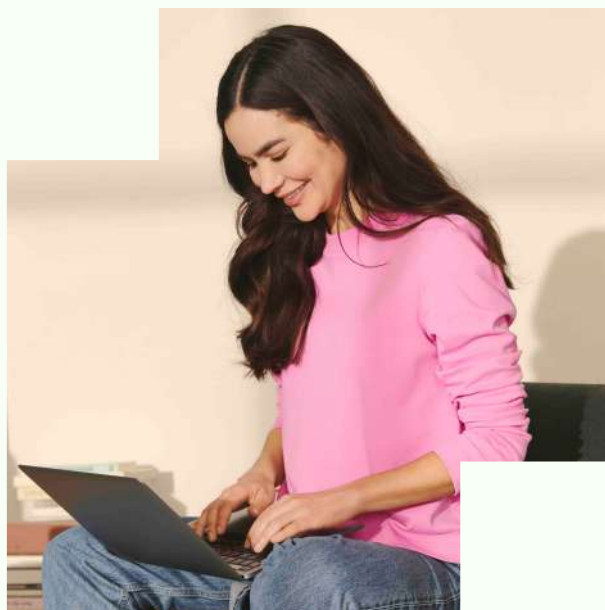
Career Workshops

Participate in extensive live workshops that are focused on developing your "elevator pitch", activating your personal and professional networks, learning job search and salary negotiation strategies, setting weekly goals, and more.

Squad Sessions

Join a Squad of a small number of your fellow students for weekly group sessions to share advice and drive each other forward. Squad Leaders are industry experts who bring their squad members from being job-ready to getting hired. You will meet your Squad Leader in Squad meetings and 1:1 sessions.

Advanced Learning

Continuous advanced training to keep sharpening your skills and expanding your experience and expertise, with additional challenges and projects to add to your portfolio. Topics include: ETL with Python, EDA, A/B testing, NoSQL, MongoDB, Data Modeling, Machine Learning, Time Series Analysis.

Interview Preparation

Master your industry technical proficiency and your personal interviewing skills through taking part in live mock-interview simulations and receiving insightful, personal feedback from industry experts.

Job Search Toolkit

Be a pro candidate by tracking your opportunities, managing your job interview process, building your portfolio, and showcasing your projects with the best tools on the market to organize and accelerate your job search.

Our Career Week

Attend our Career Week, where you'll be able to meet representatives from leading tech companies that are looking to hire our graduates.

All of our dreams can come true
if we have the courage to pursue them.

Walt Disney

Masterschool