IRON HACK

DATA ANALYTICS

FULL TIME BOOTCAMP

INDEX
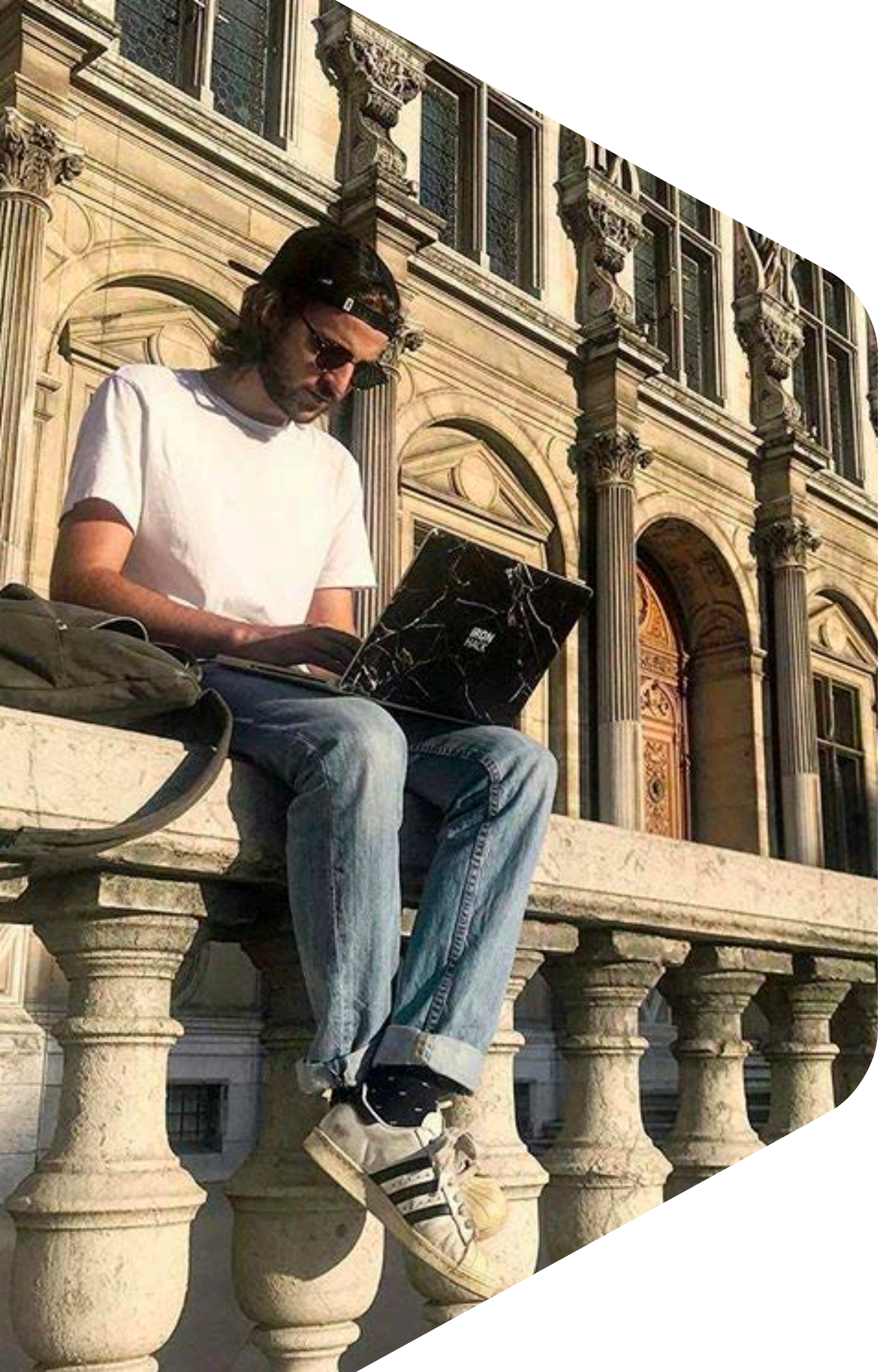
9 weeks to become
Data Analyst

The Ironhack Data Analytics Bootcamp (the Bootcamp) is a fulltime, 9-week intensive experience for students of diverse backgrounds to sharpen and expand skills in data analytics, which will help them improve in-job competitiveness, switch career paths, or seek new employment opportunities in the data and information technology sectors.

The Bootcamp blends in the most efficient elements of in-class instruction and web-based learning in its course modules to ensure the students will receive the maximal benefits from this experience.

The Bootcamp is distinguished from other data analytics curricula by focusing on developing the practical skills that are most useful for students in their current or future jobs.

The Bootcamp consists of one pre-work module and three course modules. Each course module is 3 weeks long and enriched with daily hands-on exercises. Throughout the Bootcamp, students will progressively develop knowledge and skills in data analytics, including python programming and statistical analysis, and perform increasingly complex data analyses based on real-world datasets they have compiled, cleaned, and analyzed themselves.

Learning by doing is the Ironhack way

○ **Test your knowledge of the essential topics** with hands-on guided projects at the end of each chapter.

○ **Learn the advance resources of Command Line, Git, Python, MySQL, and statistical analysis.**

○ Establish your **development environment.**

○ **Get ready and be confident** to begin the fulltime on-campus course.

○ Ramp-up pre-work and **get ready to develop.**

○ **Get ready to learn advanced topics** in data analytics and data engineering.

○ **Learn data analysis with Pandas, data visualization, and statistics in Python.**

Our Students

Recent Graduates

Need to develop practical skills useful in the data industry? Looking to enrich the resume with impressive projects combining data analytics and programming? Ironhack's Data Analytics Bootcamp is meant to help you secure a spot in the data industry.

Career Changers

Hitting a bottleneck in your career ? Consider switching to the data track! Every single profession today has an emerging data track - the perfect timing to leverage your existing expertise and move to a new level in your career ! This course is designed to help you acquire the necessary knowledge and skills in order to enter the data industry.

Career Boosters

Looking to distinguish yourself from colleagues by reading the secrets and intelligence that only numbers can tell you? This course can accelerate your career growth and help you move faster to the team lead or manager role by developing cross-disciplinary expertise in data.

Entrepreneurs

If you wonder how data can help your company succeed while the whole industry is transforming every minute, this course is for you to be familiarized with the contemporary data technologies and practices your company can benefit from.

Remote Prep.

CONCEPTS TO BE LEARNED

MODULE DESCRIPTION

Our pre-work is mandatory. When you become an official student, you're given access to 60 hours of online learning content on the fundamentals of command line, Git, Python, MySQL, and statistical analysis.

Completing the pre-work is essential for you to be familiarized with the basic topics in programming and statistics, which are prerequisites for learning data analytics.

You will learn those essential topics remotely prior to learning on campus, but you will not be fighting alone in the pre-work thanks to our Slack channel through which you have access to learning peers and academic staff.

By the end of the pre-work, you will be ready to take on a fast pace in the on campus course!

PREP YOUR ENVIRONMENT

- Command Line Basics
- Challenges: Prepare Your Environment
- Introduction to Git
- Guided Project: Checking Out Source Code

MySQL: Beginner

- Introduction to MySQL
- Summary Statistics
- Group Summary Statistics
- Guided Project: Data Using MySQL.

PYTHON : BEGINNER

- Python Basics
- Files and Loops
- Booleans And Conditional Logic
- Lists, Dictionaries... AND MUCH MORE!

STATISTICS & PROBABILITY

- Introduction to Statistics
- Measures of Variability and Correlation
- Conditional Probability

Module 1 : Week 1-3

CONCEPTS TO BE LEARNED

MODULE DESCRIPTION

This is your ramp-up module where you'll meet your classmates, teachers, and the Ironhack family.

Beyond getting to know your new community, you will learn how to setup your development environment for in-class learning and review the results of your pre-work. You will also be introduced to data wrangling/cleaning, API, web scraping, and intermediate topics in Git, MySQL, and Python.

In the last week of the module you will work on your first project as a beginning data analyst.

Get ready to build your first application in python!

GIT & VERSION CONTROL

- Git Branches
- GitHub Authentication
- Guided Project: Merging Conflicts

MySQL: Intermediate

- Relational Databases
- Data Normalization
- Query Types
- Joins and Relationships... & Much More !

DATA WRANGLING AND CLEANING WITH PANDAS

- Introduction to Pandas and Numpy
- Pandas Data Structures
- Importing and Exporting Data
- Data Manipulation
- Basic Data Cleaning
- Advanced Data Cleaning

& APIS AND WEB SCRAPPING, INTERMEDIATE PYTHON...

Module 2 : Week 4-6

CONCEPTS TO BE LEARNED

MODULE DESCRIPTION

In this module, you will dive into **serious work in data analytics.** You will learn how to conduct data analysis using Pandas and visualize data for exploratory and story-telling purposes. You will also be introduced to inferential statistics in Python and Business Intelligence.

In the last week of this module, you will develop your second project: a **complete analysis, using data you have processed, cleaned, and visualized, from real datasets!**

PANDAS - DATA ANALYSIS

○ Descriptive Statistics

○ Subsetting and Filtering Data

○ DataFrame Calculations

○ Data Aggregation and Summarization

○ Pivot Tables

STATISTICS & PROBABILITY

○ Introduction to Probability

○ Calculating Probabilities

○ Probability Distributions

○ Significance Testing

○ Guided Project: Calculating Odds

EXPLORATORY DATA VISUAL

○ Matplotlib and Seaborn

○ Histograms and Bar Plots

○ Line Charts

○ Multiple Line/Bar Plots

○ Box and Violin Plots

○ Scatter Plots and Scatter Matrices

○ Guided Project: Visualizing Real World Data

& STORYTELLING THROUGH DATA VISUALIZATION, BI...

Module 3 : Week 7-9

CONCEPTS TO BE LEARNED

MODULE DESCRIPTION

In this module, you will be introduced to the fundamentals of machine learning. You will learn how to use the Scikit-Learn machine learning library to build, evaluate, and deploy models. You will also learn about the differences between supervised and unsupervised learning, the basics of machine learning algorithms, and when machine learning is useful.

By the end of this module, you will have built an end-to-end machine learning project that processes a dataset, extracts features, trains a model, and uses that model to predict on new data.

Upon completion, you will have the knowledge and skills to apply machine learning to datasets in the real world!

MACHINE LEARNING: BASICS

- Introduction to Machine Learning
- Machine Learning Workflow
- Feature Extraction and Engineering

SCIKIT-LEARN

- Introduction to Scikit-Learn
- Building and Saving Models
- Loading Data Sets into Scikit-Learn

APPLIED MACHINE LEARNING

- Introduction to Supervised Learning
- Supervised Learning with Scikit-Learn
- Guided Project: Supervised Learning
- Introduction to Unsupervised Learning

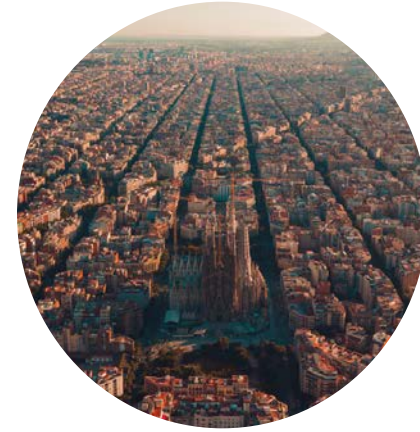- Unsupervised Learning with Scikit-Learn
- Guided Project: Clustering
- Machine Learning Pipelines
- Guided Project: Machine Learning Pipeline

Contact us

INTERESTED?
LET'S CHAT!

Check out our campuses by contacting the admissions team. You can also view student projects or attend one of our hackshows.

We look forward to connecting with you!

BARCELONA
bcn@ironhack.com
+34 648 672 310

MADRID
mad@ironhack.com
+34 636 176 382

PARIS
paris@ironhack.com
+33 644 601 557

MEXICO
mexico@ironhack.com
+52 554 163 77 11

AMSTERDAM
ams@ironhack.com
+31 628 539 055

BERLIN
berlin@ironhack.com
+49 157 359 833 35

LISBON
lisbon@ironhack.com
+351 300 509 104

SÃO PAULO
saopaulo@ironhack.com
+55 113 230 46 44

MIAMI
mia@ironhack.com
+1 (305) 907 7086