

# OPENCLASSROOMS



## Data Analyst

Discover the world of Data Science: prepare, analyze, and model data.



**Real-world  
Projects**



**Prerequisites**  
High school diploma or  
equivalent



**Apprenticeship Training**  
**Duration**  
400 hours  
**Bootcamp Training**  
**Duration**  
110 hours



**Assigned  
Mentor**



**Certificate of Completion  
of Apprenticeship**

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# OpenClassrooms

## pedagogy and experience: the keys to your success



### 100% Online

Your online training is accessible from anywhere, anytime



### Learn by doing

Put your knowledge into practice by using your new skills on real-world projects



### A mentor to support you

Benefit from the support and advice of an expert in the field throughout your training to help you progress.

Gain the skills you need for future-proof tech jobs with an earn and learn program

# 1

### Salary and training financed by a forward-thinking company, what can be better?

Earn and learn means zero cost and debt to you because it is all financed by a company. Receive a salary while you are training!

# 2

### A flexible apprenticeship program: practical for you and your business.

Your contract can start at any time of the year. The program is flexible allowing for 3 or 4 days of on-the-job training with online training days that can be adapted.

# 3

### Training that reflects the realities of your chosen profession.

This program is registered with the U.S. Department of Labor, Office of Apprenticeship.

# 4

### Online, but always supported.

Because training is never easy, you are supported by a mentor, who helps you progress. Our team of educational advisers is also there to support you at every stage of your journey.

# Pursue a career as a Data Analyst



Explore the realm of Data Science: from data preparation and analysis to data modeling.



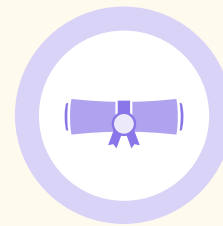
## Intended for

Individuals interested in pursuing a career in data analysis or those who want to enhance their existing analytical skills.



## Duration

**Full-time**  
**12 month** apprenticeship



## Credential

**Certificate of Completion of Apprenticeship**

Granted by the Office of Apprenticeship or the State Apprenticeship Agency.

### Target skills:

- Collect, compile, and clean raw data (often from different sources).
- Uncover narratives by helping in the analysis, interpretation, visualization, and reporting of hidden insights within the data.
- Draw conclusions and make recommendations that will help your business grow.
- Contribute to forecasting, modeling, and anticipating future trends, shaping the path ahead.

### PREREQUISITES FOR APPRENTICESHIP ADMISSION

- High school diploma or equivalent.
- Must be over 18 years of age or older and have the right to work in the U.S.
- Fundamentals of probability, statistics, and linear algebra (high school level), programming language (HTML, SQL, Python...), manipulating data (Excel, BI tool...).

### Tools, technologies and methodologies



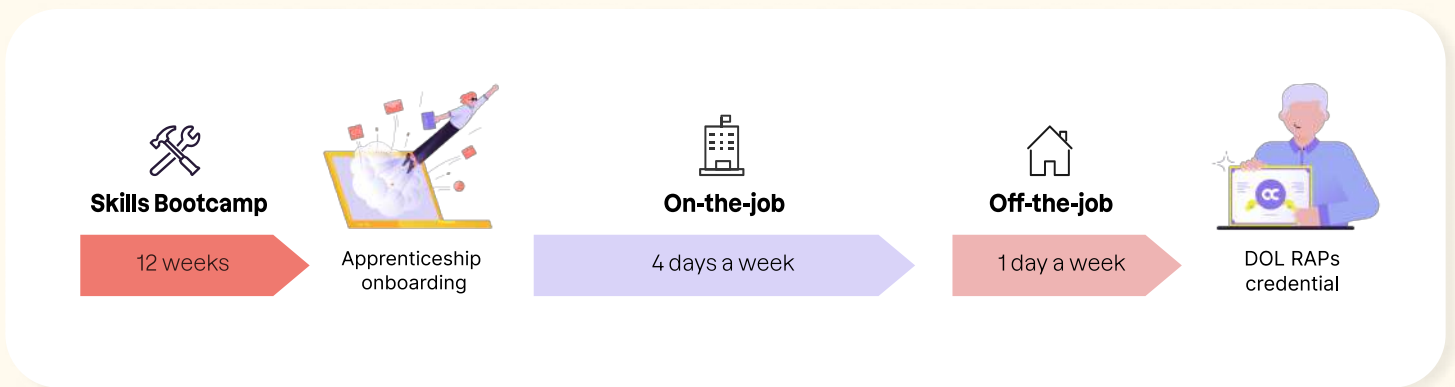
SQL



+ a b l e a u

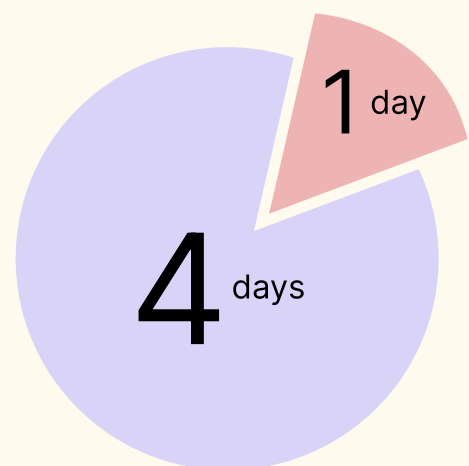
# OpenClassrooms apprenticeship programs: a win/win solution

Diversify and create a sustainable talent pipeline to fill your digital skills gaps. Start apprentices in an optional 3-month pre-apprenticeship Skills Bootcamp to ensure they are prepared with the necessary skills needed for their 12-month apprenticeship.



## Learn at the right pace

For four days per week the apprentice will be working on-the-job at your company and one day per week taking online project-based training with OpenClassrooms. You will both be supported by OpenClassrooms Success teams every step of the way.



### In your company. On-the-job

- Onboard apprentices whenever you want
- The apprentice works on company assignments
- You provide guidance to the apprentice

### At OpenClassrooms. Off-the-job

- The apprentice learns the core skills required for the job
- Project-based learning that is 100% online
- The apprentice gets one-on-one sessions with a mentor

# Skills Bootcamp

## 3 month pre-apprenticeship training

Pre-apprenticeship programs benefit both apprentices and employers by ensuring apprentices are prepared for on-the-job training from day one. The bootcamp consists of 3 - 4 projects, focused on core skills.

# Skills Bootcamp

## PROJECT 1

~ 10h

### Analyze an Energy Usage Dataset and Share your Conclusions

Utilize a spreadsheet to convert a CSV file into tables and charts that illustrate energy demand over time and other influencing factors.

#### TARGET SKILLS

- Describe the data life cycle and the steps involved
- Implement the stages of the data analysis life cycle

#### EXPECTED DELIVERABLES

- A workbook in Excel (or equivalent tool) along with a concise deck encompassing the tools used and the stages of the data life cycle

#### RECOMMENDED COURSES

- Course #1 - Improve Your Data Literacy
- Course #2 - Master the Fundamentals of Excel

## PROJECT 2

~ 40h

### Create a Dashboard that Meets Business Requirements

Create a customized dashboard for a pharmaceutical company to monitor and track the progress of ongoing projects.

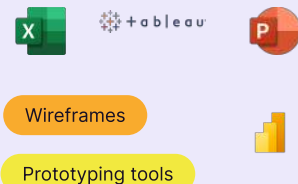
#### TARGET SKILLS

- Describe the data life cycle and the steps involved in routine tasks
- Describe principal approaches to defining customer requirements
- Undertake customer requirements analysis and implement findings
- Collate and interpret quantitative and qualitative data

#### EXPECTED DELIVERABLES

- Dashboard blueprint and mock-up
- Link to Tableau Public version of the dashboard or image format export of the dashboard
- Slideshow with answers to specific questions on life cycle and requirements

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



#### RECOMMENDED COURSES

- Course #1 - Create Dashboards with Tableau
- Course #2 - Create Dashboards with PowerBI

# Skills Bootcamp

## PROJECT 3

~ 20h

### Assess the Data Quality for a Public Service Agency

Compile and clean the data for the Parks and Open Spaces team of a County Council to assess the adequacy of their data to deliver against several projects. Utilize Python functions to compile and clean the data.

#### TARGET SKILLS

- Identify data sources and risks
- Define data principles
- Assess customer requirements analysis and implement findings
- Apply principles of data classification in analysis
- Identify and escalate quality risks and suggest resolutions

#### EXPECTED DELIVERABLES

- Jupyter Notebook - serves as the Data Quality Report
- Data source list
- Data requirements
- Project review presentation to brief future junior data analysts

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



#### RECOMMENDED COURSES

- Course #1 - Learn Python Basics for Data Analysis
- Course #2 - Use Python Libraries for Data Science

## PROJECT 4

~ 40h

### Retrieve User Activity Data on an Online Forum Using SQL

Provide key insights about user interaction on the company website to the social media manager. Dive into a dataset and identify metrics on top users, locations, and engagement.

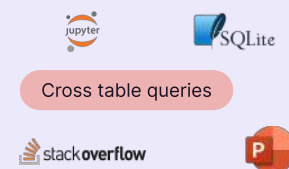
#### TARGET SKILLS

- Apply organizational architecture requirements to data analysis
- Describe fundamentals of data structures and database design
- Use data systems securely to meet requirements
- Select and apply most appropriate data tools to optimize outcome

#### EXPECTED DELIVERABLES

- Entity relationship diagram (ERD)
- Completed chat\_data\_student notebook
- Presentation covering data analysis life cycle, requirements, tools, quality, and security assessment

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



#### RECOMMENDED COURSES

- Course #1 - Design the Logical Model of your Relational Database
- Course #2 - Retrieve Data Using SQL



# Training Path

## 12 month apprenticeship program

Our apprenticeship programs combine hands-on training with 100% online learning. The apprenticeship program consists of 6 - 8 projects, focused on acquiring core skills that can be applied on-the-job.

# Training Projects

## PROJECT 1

~ 10h

### Dive into your Data Analyst Apprenticeship

Discover what you'll be learning during your apprenticeship and get to know your mentor. Define your learning goals in this initial project.

#### TARGET SKILLS

- Define your training framework

#### EXPECTED DELIVERABLES

- Training schedule

#### RECOMMENDED COURSES

- Course #1 - Improve your Data Literacy
- Course #2 - Develop your Soft Skills

## PROJECT 2

~ 40h

### Analyze Requirements and Plan a Data Analysis Project

Gather, assess, and recommend countries that an agribusiness company should invest in for future international expansion.

#### TARGET SKILLS

- Design research projects that apply valid scientific techniques
- Design projects that consider domain context and user needs
- Determine whether statistical methods are appropriate
- Collect datasets and samples that are suitable for specific projects

#### EXPECTED DELIVERABLES

- Business requirements document
- Six raw data files (extracted from suggested data sources)
- Data relationship diagram
- Jupyter Notebook with analysis and assessment
- Project review presentation

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES

Code editor



#### RECOMMENDED COURSES

- Course #1 - Learn Python Basics for Data Analysis
- Course #2 - Use Python Libraries for Data Science
- Course #3 - Perform an Initial Data Analysis
- Course #4 - Improve your Presentation Skills

# Training Projects

## PROJECT 3

~ 30h

### Perform an Initial Data Analysis and Modeling Based on Sales Data

Analyze historical sales data for a natural food store chain that's about to launch an online marketing campaign. Help them target the best customer profile based on your analysis.

#### TARGET SKILLS

- Analyze statistical data to identify differences in source relationships
- Adapt statistical methods to solve problems in diverse fields
- Identify factors in data that could affect research results
- Identify relationships and trends in data

#### EXPECTED DELIVERABLES

- Jupyter Notebook containing the performed analyses
- Summary presentation with results

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



#### RECOMMENDED COURSES

- Course #1 - Design Effective Statistical Models to Understand your Data
- Course #2 - Develop your Critical Thinking

## PROJECT 4

~ 40h

### Analyze an Existing Database and Retrieve Data

Work on an existing database in your company, studying its structure, and querying it. Consider how security, legislation, ethics, and maintenance affect database design decisions.

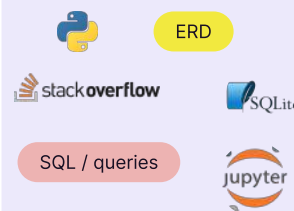
#### TARGET SKILLS

- Configure database systems
- Design software applications or programming for modeling
- Develop code to implement the system
- Implement secure systems that adhere to legislation and ethics

#### EXPECTED DELIVERABLES

- Written consent from workplace advisor for topic choice
- ERD
- Query document
- Completed Jupyter Notebook
- Presentation on key findings on maintenance and security measures of queried database

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



#### RECOMMENDED COURSES

- Course #1 - Design the Logical Model of your Relational Database
- Course #2 - Implement a Relational Database with SQL
- Course #3 - Retrieve Data Using SQL

# Training Projects

## PROJECT 5

~ 30h

### Prepare data for analysis and assess its quality

Work on a data acquisition project and decide if the data is good enough to perform an analysis. Compile and clean the data using Python functions then evaluate its quality.

#### TARGET SKILLS

- Evaluate sources of information to determine any limitations
- Process large amounts of data for statistical modeling and analysis
- Prepare data by organizing information

#### EXPECTED DELIVERABLES

- Written consent from your workplace advisor for topic choice
- Jupyter Notebook
- Data source list
- Business requirements documentation
- Presentation on general data quality conclusions

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



#### RECOMMENDED COURSES

- Course #1 - Use Python Libraries for data science
- Course #2 - Work effectively in a team

## PROJECT 6

~ 40h

### Produce a dashboard to visualize data

Create a customized dashboard using a dashboard tool your company uses to help them keep track of and monitor the progress of an ongoing project.

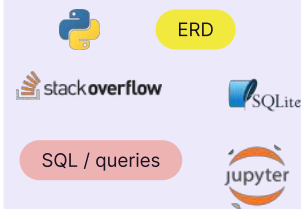
#### TARGET SKILLS

- Present statistical and non-statistical results
- Report results of statistical analyses (visualization)

#### EXPECTED DELIVERABLES

- Written consent from workplace advisor for topic choice
- Data dictionary
- Dashboard blueprint & mock-up
- Link to your dashboard
- Project presentation

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



#### RECOMMENDED COURSES

- Course #1 - Create dashboards with Tableau
- Course #2 - Create dashboards with Power BI
- Course #3 - Retrieve Data Using SQL

# Training Projects

## PROJECT 5

~ 30h

### Prepare Data for Analysis and Assess its Quality

Work on a data acquisition project and decide if the data is good enough to perform an analysis. Compile and clean the data using Python functions then evaluate its quality.

#### TARGET SKILLS

- Evaluate sources of information to determine any limitations
- Process large amounts of data for statistical modeling and analysis
- Prepare data by organizing information

#### EXPECTED DELIVERABLES

- Written consent from your workplace advisor for topic choice
- Jupyter Notebook
- Data source list
- Business requirements documentation
- Presentation on general data quality conclusions

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



Boxplots

#### RECOMMENDED COURSES

- Course #1 - Use Python Libraries for Data Science
- Course #2 - Work Effectively in a Team

## PROJECT 6

~ 40h

### Produce a Dashboard to Visualize Data

Create a customized dashboard using a dashboard tool your company uses to help them keep track of and monitor the progress of an ongoing project.

#### TARGET SKILLS

- Present statistical and non-statistical results
- Report results of statistical analyses (visualization)

#### EXPECTED DELIVERABLES

- Written consent from workplace advisor for topic choice
- Data dictionary
- Dashboard blueprint & mock-up
- Link to your dashboard
- Project presentation

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



#### RECOMMENDED COURSES

- Course #1 - Create Dashboards with Tableau
- Course #2 - Create Dashboards with PowerBI
- Course #3 - Speak in Public
- Course #4 - Develop a Service-Minded Attitude

# Training Projects

## PROJECT 7

~ 10h

### Keep Track of Emerging Data Analysis Industry and Technology Trends

Identify relevant sources to keep up with emerging data analysis methods from industry and academic research. Stay up to date with new technologies, products, and services relevant to the data analysis field.

#### TARGET SKILLS

- Keep up to date on new technology trends in data analysis
- Learn about new and emerging data analysis methods
- Synthesize information gathered from knowledge management tools

#### EXPECTED DELIVERABLES

- Written consent from workplace advisor
- List of information sources on data science
- AI use case working document
- Slide deck pitch

#### TOOLS, TECHNOLOGIES, AND METHODOLOGIES



#### RECOMMENDED COURSES

- Course #1 - Stay Up to Date with Innovations in your Field
- Course #2 - Destination AI: Introduction to Artificial Intelligence

# Clear steps to guide you towards your future career.

1

## Study guidance

Selecting the best option for your future is never easy, but our team is here to guide you through your training options and advise you on financing options by e-mail, telephone or via webinars.

2

## Start date

Together we ensure that you meet the prerequisites, register, and identify apprenticeship employer options. Or if you are in the Talent Marketplace, an employer may reach out to you directly.

3

## Your onboarding

As soon as you are matched with an employer, you take part in an onboarding webinar to familiarize yourself with our training. Learn about the program, schedule, and stay for Q&A: you will be able to start your educational journey with complete peace of mind.

4

## Skills acquisition

No more grades: you are assessed through the acquisition of skills and the completion of professional projects, which will allow you to build a portfolio, in cooperation with your mentor, our educational team and our online resources.

5

## Jury and certificate

Your portfolio is evaluated by a jury of experts responsible for validating the acquisition of the skills necessary to receive a Certificate of Completion of Apprenticeship.

6

## Career

With your certificate of completion in hand, you are ready to start working, at a company or on your own. You're ready to begin!

## They trust us



# High-quality Training

Our training and our courses are designed especially for you, by our team of recognized experts and professionals.



## Skills sought by companies

**Our job? To identify the skills and jobs most sought after by employers, so that your training has a real impact, today and tomorrow. We're here for you, all the way. (And even beyond.)**

## Field experts

Your courses and projects are built in collaboration with recognized professionals in their field, so that your training is as close as possible to the reality of the profession. Start off on the right foot with project-based learning.



## Our production studio

We produce all training content in our own production studio to have 100% control over the content and quality.



# Autonomous doesn't mean you're alone. We provide support every step of the way.

## A passionate mentor



Starting something new (and doing it successfully) is never easy. Especially when you're on your own. Fortunately, at OpenClassrooms we are passionate and we want you to succeed as much as you do. You are accompanied by an expert throughout your course, who will help you progress and reach your goals.

**"I help the students on technical aspects. But it goes beyond that: I motivate them, give them self-confidence, provide them with soft skills for their future career."**

PATRICK, OpenClassrooms mentor

### **PEDAGOGICAL ADVISORS**

Obstacles and difficulties happen. Our team of educational advisors are here to help you overcome them by supporting you and ensuring you finish your training on time.

### **A VIBRANT COMMUNITY**

While we provide guidance throughout your training, we also provide you the opportunity to engage with the global OpenClassrooms community on our social network. You're never alone, and you're always connected.

### **A PERSONAL CAREER COACH**

Although you are independently studying, you are never alone. From the start of your training program, you can contact learners and mentors on the OpenClassrooms social network.

# Feedback from our students.

Our greatest reward is the impact we have had on the careers of thousands of people since our creation, and we don't intend to stop there.

**“For me, doing an earn and learn apprenticeship program was important, because it got me back on track. After six years on my own, it helped me get back into the rhythm of a job, to relearn the relationship with a boss, and it was necessary for me”**

STEPHANIE, apprenticeship, payroll manager



**“The apprenticeship program is really very professionalizing. I do both strategy, creation, writing... and in my work, I manage a community and I host webinars on a daily basis”**

VICTORIA, apprenticeship, marketing strategy expert



## We are a B-corp certified mission-driven company

OpenClassrooms has a dedicated team working to make education accessible. This mission is the heart of our organization and serves as our guide. That is why we have received B Corp certification. A prestigious certification that recognizes businesses that meet a high standard of social and environmental standards.





# Ready to start your career?

Our team is ready to advise you on finding the perfect training program for you!

Contact us

**OPENCLASSROOMS**