

Data Science & Machine Learning

Part-Time Online

24-weeks, 30 hours/week



Part-Time
class commitment



Career Path Focus
built into curriculum



Learn by Doing
real projects, real datasets

Program Overview 24 Weeks

The Data Science and Machine Learning program combines data science fundamentals with practical skills to harness technologies in Python, SQL, and Tableau to produce powerful data insights and develop, train, and optimize Machine Learning models.

Students in this program will study intermediate and advanced Machine Learning concepts in Deep Learning, Natural Language Processing, and unsupervised machine learning. Through the program, students will delve into data manipulation using Pandas, exploring hypothesis testing, ETL processes, time series analysis, and creating reporting-quality visualizations in Tableau. Upon completion of the program, students will have tackled real-world data challenges to train and deploy Data Science models from end-to-end.

Comprehensive Curriculum with Hands-

On Experience. Advanced Machine Learning curriculum: Beginning with fundamental concepts, the bootcamp also delves into advanced machine learning topics, including unsupervised machine learning, deep learning, and natural language processing. This helps students prepare to tackle complex data science problems and apply industry-relevant techniques through hands-on experience.

Real Data Sets. Data Science

Accelerator. Explore skills and technologies needed to launch your data career path: data cleaning, exploratory data analysis, regression, classification, model evaluation, and more. By working with relational databases, performing ETL processes, and conducting time series analysis for accurate forecasting, experience what data professionals use day to day in their career paths.

Develop Industry-Ready Skills.

Our industry-relevant curriculum helps you prepare to develop a strong foundation in key areas, allowing you to study the skills needed to launch a career path in the data industry. But we don't stop at the basics. Prepare to explore advanced machine learning concepts, including unsupervised learning, Deep Learning, and Natural Language Processing (NLP). Our program goes beyond the surface, giving you the opportunity to tackle complex data challenges head-on.

Learn By Doing. Designed in a practical format for you to problem-solve real-world problems by building real projects with actual solutions. Students who successfully complete the program will exit with five portfolio projects all based on real-data sets and authentic stakeholder questions featuring CRISP-DM workflow, the Extract, Transform, Load process, time-series analysis in Tableau, the students choice of either Deep Learning or Machine Learning process, and Exploratory Data Analysis of Natural Language Data.



Up Next: Technologies Covered

Technologies Covered

We'll cover a wide range of industry-relevant technologies throughout the 24-week program.

	Python		SQLite
	NumPy		Keras
	Pandas		Tensor Flow
	Matplotlib		Markdown
	Seaborn		Statsmodels
	Google Colaboratory		JSON
	SciPy		GitHub Desktop
	Scikit-Learn		Jupyter Notebook
	XGBoost		Tableau
	LightGBM		SHAP
	SQL		LIME
	SQLAlchemy		



Up Next: The 24 Week Curriculum

The Curriculum

Data Analytics and Visualization

24 WEEK COURSE

1

Weeks One to Four

Data Science Fundamentals

Kicking off the program with Data Science fundamentals, explore introductory coding within Python and its libraries.

2

Weeks Five to Eight

Intro to Machine Learning

Familiarize yourself with Machine Learning by pre-processing raw data sets, writing code for, optimizing, and explaining supervised statistical models in Scikit-Learn and SHAP.

3

Weeks Nine to Twelve

Data Enrichment

Dive into database architecture exploring data normalization, ETL processes, and hypothesis testing. Write and interpret queries within MySQL.

4

Weeks Thirteen to Sixteen

Data Visualization

Explore visualization's end-to-end process through writing code, identifying, pre-processing and resampling time series datasets. Then, explore analysis and visualization techniques through powerful visualization tool, Tableau to create and optimize an interactive dashboard.

5

Weeks Seventeen to Twenty

Intermediate Machine Learning

Get introduced to unsupervised Machine Learning models in clustering and dimensionality reduction. Interpret code in feature engineering, write code for CNN models, and summarize concepts within Deep Learning models.

6

Weeks Twenty-One to Twenty-Four

Advance Machine Learning

Wrap up the program focused on Natural Language Processing and Recurrent Neural Networks. Through these studies, students can perform text classification and visualize language usage for stakeholders, develop into data acquisition techniques, and deploy a previously trained model to the cloud.

What You'll Focus On:

- Python Fundamentals
- Load, explore, and understand data in Pandas
- Exploratory Data Analysis (EDA) using Seaborn & Matplotlib
- Create and customize plots for explanatory visualizations

How it's Used:

- Interpret data and historical trends for stakeholders
- Create high quality visuals for reporting

What You'll Focus On:

- Formatting and preprocessing for supervised Machine Learning
- Train models in regression, classification, and supervised learning
- Model Optimization
- Extract, visualize, and interpret model insights

How it's Used:

- Use machine learning models to make predictions
- Use insights from models for data-driven business decisions

What You'll Focus On:

- Database architecture in SQL
- Intro to ETL: navigate JSON files, extract from APIs, and convert Panda dataframes
- Hypothesis testing, interpretation of results, and communicating results to stakeholders in non-technical terms
- Advance SQL

How it's Used:

- Design and maintain a SQL database
- Provide statistical support for business decisions (A/B testing)
- Extract information from APIs

What You'll Focus On:

- Time Series Analysis in Python
- Applying Machine Learning to forecast Time Series data for both short and long term
- Perform analysis and quality visualizations in Tableau
- Create interactive, responsive dashboards within Tableau

How it's Used:

- Make dynamic forecasts to develop long term business strategies and contingencies
- Use historical trends and analysis to inform reports for stakeholders
- Provide stakeholders with data insights via an interactive Tableau dashboard

What You'll Focus On:

- Develop, evaluate, and perform explanatory analysis of Clusters
- Improve visualizing data with high dimensionality and improve supervised learning performance
- Deep Learning: conceptualize, design, and evaluate common terminology with neural networks
- Prepare and apply image data using convolutional neural networks (CNNs)

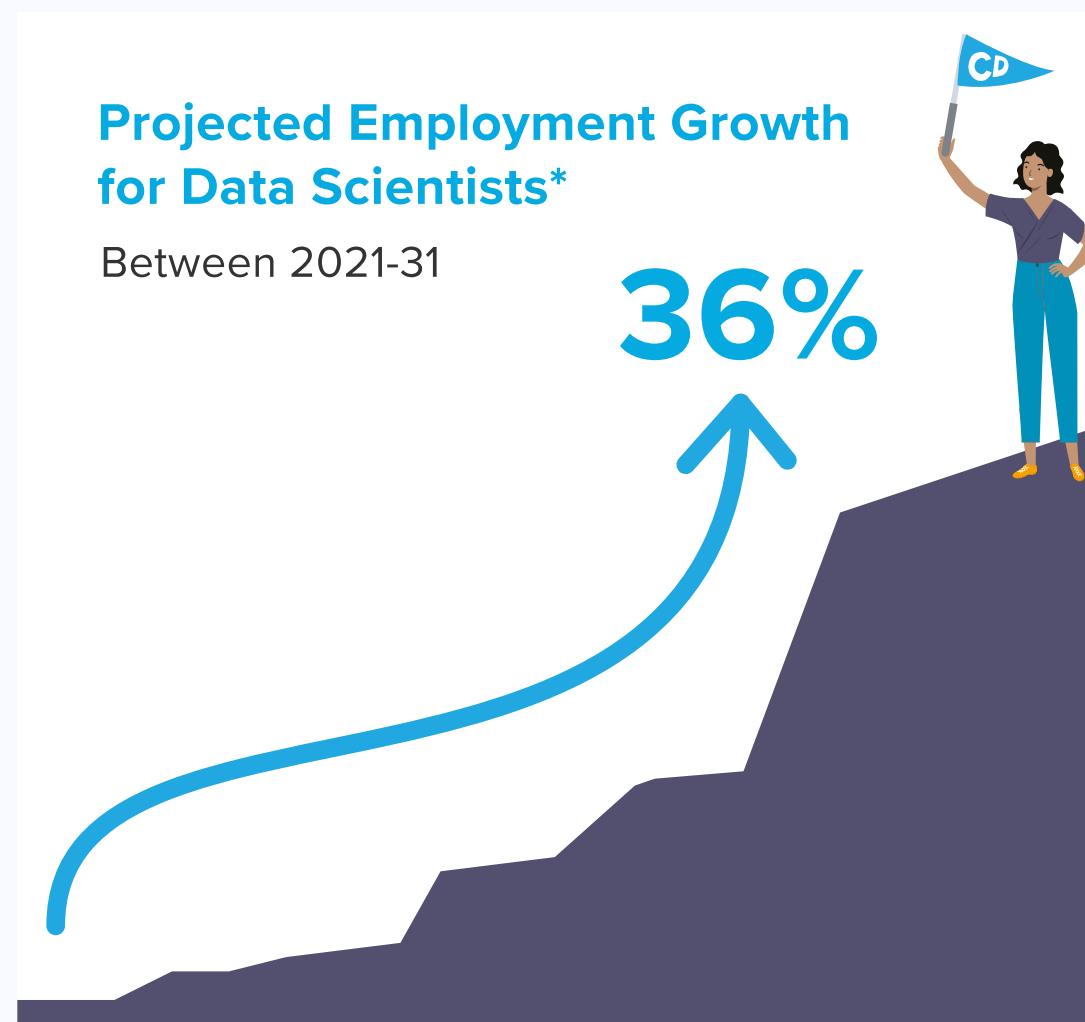
How it's Used:

- Market segmentation analysis
- Make predictions for stakeholders with more complex data
- Optical character recognition

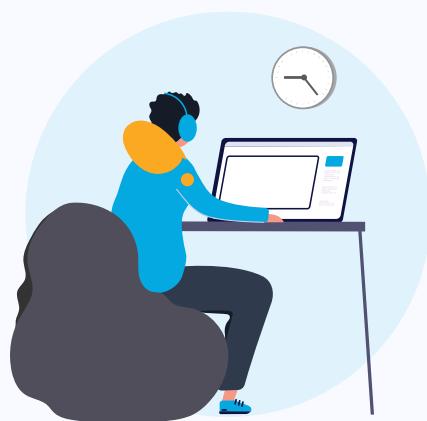


Up Next: Industry Trends

Industry Trends

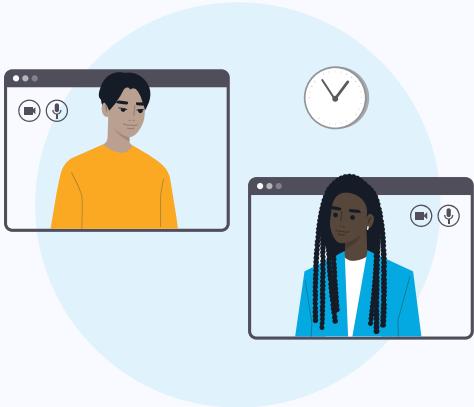


An Example Day's Schedule in a Data Science Program



Morning

Head to Work



Mid-Morning

Self-Study over Lunch



Evening

Lecture & Office Hours

24/7 Cohort Access

Your access to our LEARN Platform and Discord is available 24/7. Access your materials at whatever time you need them.

Self Study

Most students dedicate 30 hours a week to self-study, though you may need more or less depending on your learning style and experience.

Lectures

Live lectures are held **twice per week** for an hour and a half from **7PM to 8:30 PM**. Lecture days are **Monday/Wednesday** or **Tuesday/Thursday** depending on your cohort's start date.

Optional Office Hours

Need more assistance understanding a concept? Optional office hours are held thirty minutes before and after lecture times between **6:30PM to 7:00 PM** & **8:30PM to 9:00 PM**



Up Next: Career Services

Career Services

Lifetime career services support. Our experienced Career Services team provides guidance, strategy, and prep to help you in your job search whether it's post-graduation or later down the road.

1

Professional Profile & Portfolio Building

From day one, gain access to your Career Services Manager who will begin to guide you into creating your digital footprint, learning skills companies seek, and building a profile that communicates those points to recruiters. Milestones:

- ✓ LinkedIn profile creation and optimization
- ✓ Github Portfolio Production
- ✓ Resume Development & Curation

2

Job Prospecting & Application Guidance

All while learning the most popular programs in tech, you'll be working on your job search for when graduation approaches. Your Career Service Manager will work with you on potential job titles to seek, explain different role descriptions, and guide you on what this first job post-bootcamp can help you work toward your long-term career goals.

Milestones:

- ✓ Real Job Search
- ✓ Sample Applications
- ✓ Hiring Manager Communication
- ✓ Job Title Refinement

3

Interview Prep & Negotiation

One of the largest complaints by tech recruiters is it's easy to find people who can code and perform data analysis, but most of these people can't communicate or work in teams. Whether you're an introvert or a natural leader, our Career Services team will help you to show up as your best self in interviews and your day-to-day work. Milestones:

- ✓ Mock Job Interviews
- ✓ Technical Job Skills Tests
- ✓ Target Compensation Management
- ✓ Contract Negotiation

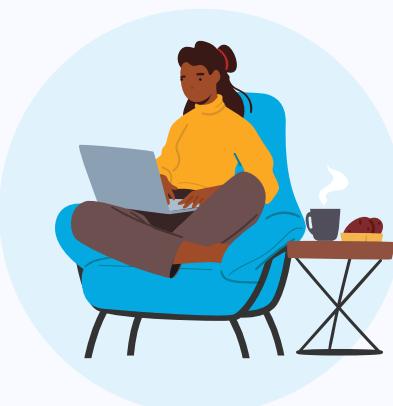


How to Enroll



Do Your Research

- Explore our programs on our website and view other program overviews.
- Schedule a call with one of our Admissions Advisors who will talk through your future career goals and what program may best suit you.
- Attend an Open House to meet directly with our Instruction and Career Service Managers.



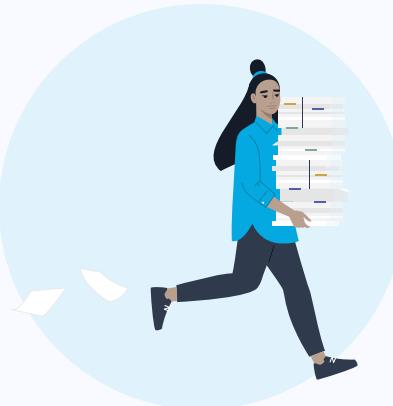
Submit Application

- Submit your application! The application process takes less than 5 minutes and does not include a technical assessment.
- Complete a quick 30-minute interview with our Admissions team.
- Receive your decision within 2-3 business days.



Explore Financing Options

- Our Admissions Advisors will help you explore our financing options.
- Coding Dojo offers a variety of payment options



Finalize Your Enrollment

- Submit your deposit, confirm your financing, and sign your Enrollment Agreement to reserve your seat in class!
- Your Admissions Advisor will introduce you to your Student Experience Manager who will help you get ready to start bootcamp.



Up Next: Financing Options

Contact Us

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Data Analytics & Visualization

Part-Time Online

16-weeks, 30 hours/week



Part-Time
class commitment



Career Path Focus
built into curriculum



Learn by Doing
real projects, real datasets

Program Overview 16 Weeks

The Data Analytics and Visualization program combines data science fundamentals with practical skills to delve into popular technologies, Python, SQL, and Tableau along with specialized toolkits to manipulate, process, and visualize data into powerful insights.

Students will study data manipulation using Pandas, apply Machine Learning concepts, explore hypothesis testing, ETL processes, time series analysis, and create reporting-quality visuals in Tableau. Throughout the program, students will work across a range of technologies, languages, frameworks, and libraries. Upon completion of the program, students will have tackled real-world data challenges and have made informed decisions using data-driven insights.

Hands-On Experience. Explore with a hands-on approach. Our bootcamp offers extensive hands-on experience with industry-relevant data science technologies and methodologies. Apply your skills to real-world projects and develop practical problem-solving abilities. Students who successfully complete the program will exit with three portfolio projects all based on real-data sets and authentic stakeholder questions featuring the CRISP-DM workflow, the Extract, Transform, Load process, and time-series analysis in Tableau to showcase their studies.

Industry-Relevant, Comprehensive Curriculum. Delve into popular technologies, Python, SQL, and Tableau, including regression and classification algorithms, model evaluation and optimization, relational databases, ETL processes, hypothesis testing, time series analysis, time series forecasting, and Tableau visualizations and dashboards.

Real Data Sets. Develop job-ready skills in data analytics and visualization by working with real-data sets. Explore Python coding, data cleaning with Pandas, exploratory data analysis, predictive modeling, SQL, and Tableau. Build your portfolio utilizing real datasets answering key stakeholder questions with tools utilized in the industry today.

Learn By Doing. Designed in a practical format for you to problem-solve real-world problems by building real projects with actual solutions.



Up Next: Technologies Covered

Technologies Covered

We'll cover a wide range of industry-relevant technologies throughout the 16-week program.



Python



NumPy



Markdown



Pandas



Matplotlib



SQL



Seaborn



MySQL Workbench



Google Colaboratory



SQLAlchemy



SciPy



SQLite



Scikit-Learn



Jupyter Notebook



Statsmodels



Tableau



JSON



SHAP



GitHub Desktop



LIME



Up Next: The 16 Week Curriculum

The Curriculum

16 WEEK COURSE

Data Analytics and Visualization

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Weeks One to Four

Data Science Fundamentals

Kicking off the program with Data Science fundamentals, explore introductory coding within Python and its libraries.

2

Weeks Five to Eight

Intro to Machine Learning

Familiarize yourself with Machine Learning by pre-processing raw data sets, writing code for, optimizing, and explaining supervised statistical models in Scikit-Learn and SHAP.

3

Weeks Nine to Twelve

Data Enrichment

Dive into database architecture exploring data normalization, ETL processes, and hypothesis testing. Write and interpret queries within MySQL.

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Weeks Thirteen to Sixteen

Data Visualization

Explore visualization's end-to-end process through writing code, identifying, pre-processing and resampling time series datasets. Then, explore analysis and visualization techniques through powerful visualization tool, Tableau to create and optimize an interactive dashboard.

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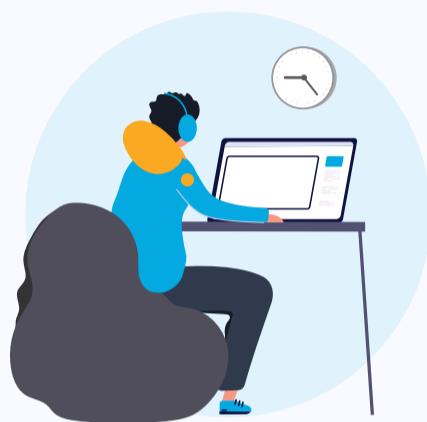
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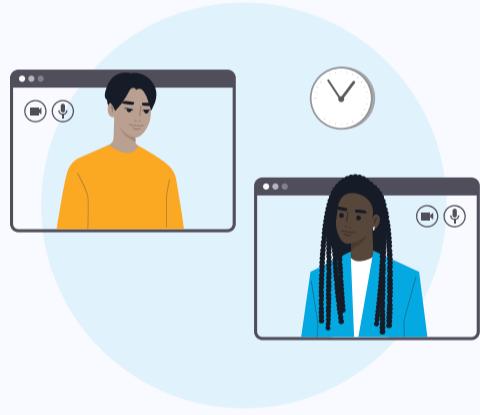


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Lifetime career services support. Our experienced Career Services team provides guidance, strategy, and prep to help you in your job search whether it's post-graduation or later down the road.

1

Professional Profile & Portfolio Building

From day one, gain access to your Career Services Manager who will begin to guide you into creating your digital footprint, learning skills companies seek, and building a profile that communicates those points to recruiters. Milestones:

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Milestones:

- ✓ Real Job Search
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One of the largest complaints by tech recruiters is it's easy to find people who can code and perform data analysis, but most of these people can't communicate or work in teams. Whether you're an introvert or a natural leader, our Career Services team will help you to show up as your best self in interviews and your day-to-day work. Milestones:

- ✓ Mock Job Interviews
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Coding Dojo cannot guarantee employment, salary or career advancement.



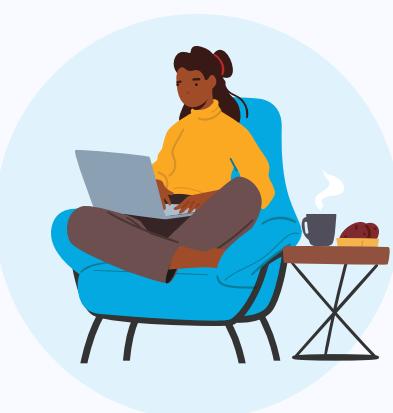
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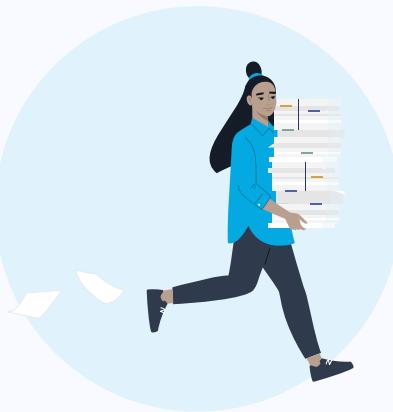
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