



# Byte Academy

*Data Science Mini courses*

# Introduction

Byte Academy **pioneered industry-focused programs** beginning with the launch of our FinTech course, the first of its type. Our educational programs bridge the gap between “business” and technology. Offerings include Python Fullstack Software Development, Data Science, FinTech, Quant-Algos, Product Management and Blockchain.

We work with companies to develop and adapt our curriculum to teach skill-sets that match real hiring needs. We also utilize the expertise of leading business executives, industry professionals, and those passionate about education and software development to craft each course. Many of these individuals teach at Byte.

Our courses are open to individuals spanning from beginner to more advanced programming backgrounds. Some may have already had industry expertise or work experience while others are brand new to the domain that they want to study. We provide **scholarships to women** and offer a **tuition deferral program** in which eligible students pay us back after they get a job.

Course formats include onsite **full-time, part-time and remote** in addition to customized corporate training.

For more information please see [www.byteacademy.co](http://www.byteacademy.co)





# Data Science Mini - Courses

Shorter evening and weekend classes on particular areas of Data Science

<u>Level</u>	<u>Name</u>	<u>Description</u>	<u>Topics</u>	<u>Schedule</u>
Python 101	Python For Data Science	This three week course introduces students to data science, statistics, and linear algebra using Python. No prior experience is necessary.	Data Types & Operators Lists & Dictionaries Control Flow Functions Statistics with Scipy Linear Algebra with Numpy Object Oriented Programming	3 Weeks, 2 eves/week
DataSci 109	Intro to Data Science + Statistics using R	This three week course introduces students to data science and statistics using R. No prior experience is necessary.	Syntax + Control Flow Lists, Vectors + DataFrames Summary Statistics Statistical Analysis Probability & Bayes Hypothesis Testing	3 Weeks, 2 eves/week
DataSci 200	Data Wrangling with Python	This course focuses on the methodology behind data acquisition, cleaning, and preparation. Proficiency with either Python or R is required.	CSVs & JSON APIs & Web Scraping DataFrames: Pandas & Dplyr Data Merging & Normalization Outlier Detection & Missing Values	2 Weeks, 2 eves/week
DataSci 201	Data Visualization with Python	This course focuses on various data visualization techniques and how they can help us engage and learn from our data. Proficiency with either Python or R is required.	Line & Scatter Plots Histograms & Distributions GeoSpatial Data Analysis Seaborn, Bokeh, & Ggplot. Exploratory Analysis	2 Weeks, 2 eves/week
DataSci 209	Fundamentals of Machine Learning with Regression	Machine Learning and Prediction Analysis is the heart of many technological companies, from Google to Facebook to Amazon. Over three weeks, you'll learn the fundamentals of machine learning and further your knowledge of the field with Regression Analysis. Fluency with Python or R and statistics is required.	Overview of Machine Learning Simple Linear Regression Multiple Linear Regression Non-Linear Regression Logistic Regression Time Series Regression Ridge and Lasso Regression	3 Weeks, 2 eves/week
DataSci 210	Natural Language Processing for Data Science	Natural Language Processing is a rapidly growing field because of its application across all disciplines. In this 3 week course, learn about the basics of text analysis, regular expressions, different topic models, and much more. This course is designed to give you a thorough understanding of the field. Fluency with Python, statistics, and data wrangling is required.	Regular Expressions Word Tagging Components of Speech Sentiment Analysis Information & Entity Extraction Topic Modeling & Summarization nltk & gensim word2vec & TensorFlow	3 Weeks, 2 eves/week



# Data Science Mini - Courses (2)

<u>Level</u>	<u>Name</u>	<u>Description</u>	<u>Topics</u>	<u>Schedule</u>
DataSci 303	Databases & Big Data	With the consistent growing of data every day, engineers are forced to become equipped to handle, prepare, and process this data in a computationally efficient manner. This course reviews different database & big data architecture tools available in the data science industry today. Strong knowledge of Python and data acquisition required.	Intro to Databases with SQL NoSQL & MongoDB MySQL & PostgreSQL Hadoop & Spark Kafka & Storm Amazon Web Services	4 Weeks, 2 eves/week
DataSci 309	Machine Learning With Data Science	Working off of the DataSci 209 curriculum, this course enters the sphere of machine learning algorithms, including topics in both supervised and unsupervised learning. These four weeks will be heavily project and exercise based, but with the mathematical implications of this work heavily in mind. Strong knowledge of Python, statistics, linear algebra are required.	Naive Bayes Support Vector Machines Decision Trees Random Forests Clustering Cross Validation	4 Weeks, 2 eves/week
DataSci 403	Deep Learning with Data Science	Deep Learning is a lucrative subfield of Machine Learning. In this course, we'll cover the mathematical skills required to understand the material, as well as the fundamentals of Neural Networks and different deep learning models. Prior knowledge of Python, linear algebra, and calculus is required.	Select, Calculus, Linear Algebra, & Statistics topics Neural Networks, Recurrent Neural Networks, Convolution Neural Network, Feedforward Neural Networks, LTST Neural Networks	2 Weeks, 2 eves/week
DataSci 500	Build An Application: Projects	Students are required to use at least three of the technologies covered in the other courses. On Demo Day, students present their final projects to hiring partners.	As part of the final project, students will be guided by instructors at Byte Academy, as well as working professionals in the field.	2 Weeks, 2 eves/week

# More information?

[info@byteacademy.co](mailto:info@byteacademy.co)

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