

Introducing DS12

DS12 is an advanced 12-week program embedded in DataScience, Inc. that teaches functional programming skills to 12 qualified candidates.

A DATASCIENCE RESIDENCY

 **No tuition fees or non-compete agreements**
DS12 is free to attend, and we won't lock you into working at any particular company. Some students may be eligible for financial assistance related to living expenses and housing.

 **Embedded in a real data science company**
The DS12 facility is part of [DataScience, Inc.](#), a Culver City, Calif.-based startup that provides data science as a service and platform to leading companies.

 **Guaranteed career growth opportunities**
Graduates emerge from the program with the knowledge and hands-on experience to work as data scientists, an in-demand role that is rewarding as well as lucrative.

 **World-class instructors and mentors**
Students learn directly from experienced data scientists, software engineers, and managers who have tackled challenging data science problems across multiple industries.

WHAT SETS US APART

Applicants need a strong background in math, engineering, or computer science and the ability to work with large-scale data in a multiprocessor environment to be considered for the program, which is highly competitive — and tuition free.



For more information, visit education.datascience.com

PROGRAM TIMELINE

	Week 1-2	Week 3-4	Week 5-6	Week 7-8	Week 9-12
METHODS	<ul style="list-style-type: none">• MapReduce	<ul style="list-style-type: none">• Frequent itemset mining	<ul style="list-style-type: none">• Locality-sensitive hashing	<ul style="list-style-type: none">• Matching problems	<ul style="list-style-type: none">• Recommender systems
MODELS	<ul style="list-style-type: none">• Bayesian statistics	<ul style="list-style-type: none">• Regression	<ul style="list-style-type: none">• Classification	<ul style="list-style-type: none">• Ensemble methods	<ul style="list-style-type: none">• Latent factor models
FUNCTIONAL PROGRAMMING	<ul style="list-style-type: none">• Recursion and combinators	<ul style="list-style-type: none">• Monoids and monads	<ul style="list-style-type: none">• Applicative and traversable functors	<ul style="list-style-type: none">• Stream processing	<ul style="list-style-type: none">• Large graphs
LAB	<ul style="list-style-type: none">• Structured data	<ul style="list-style-type: none">• Regression trees	<ul style="list-style-type: none">• Entity resolution	<ul style="list-style-type: none">• Online algorithms	<ul style="list-style-type: none">• Capstone project

COURSE DESCRIPTIONS

Methods

This course focuses on algorithmic and computational methods for mining large datasets. After we introduce you to new concepts, we'll place them into the context of a library and terascale data problem, using raw data sets from real DataScience clients.

Functional Programming

You will study the elements of modern functional programming and their application to scalable data manipulation using the Scala Collections library and MapReduce frameworks like Scalding and Spark. We'll tackle purely functional data structures, combinators, effect factoring, and more.

Models

We'll introduce you to the models used in modern machine learning applications, with an emphasis on implementation and extension. Class starts on a white board, with discussions about mathematics, and evolves into a live coding session. We'll dive into the source code and APIs you'll need to know to do your work.

Lab

This is where everything you're learning comes together. You'll work together on real-world projects alongside our instructors and TAs. Midway through the program, you will begin to take on longer projects that require production engineering skills.

