

# **Data Science with Python**

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# CERTIFICATE



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# Introduction

## Getting started with Data science.

Data science is likely to be an interesting field with multi-disciplinary training in computer science, business, economics, statistics, and armed with the necessary quantity of domain knowledge relevant to the question at hand. The potential of the field is enormous for just a few well-trained data scientists armed with big data have the potential to transform organizations and societies. In the narrower domain of business life, the role of the data scientist is to generate applicable business intelligence.

Data science is the practice of using data to try to understand and solve real-world problems. This concept isn't exactly new; people have been analyzing sales figures and trends since the invention of the zero. In the past decade, however, we have gained access to exponentially more data than existed before. The advent of computers has assisted in the generation of all that data, but computing is also our only way to process the mounds of information. With computer code, a data scientist can transform or aggregate data, run statistical analyses, or train machine learning models. The output of this code may be a report or dashboard for human consumption, or it could be a machine learning model that will be deployed to run continuously.

## what is data science?

Data science is transforming business. Companies are using medical data and claims data to offer incentivized health programs to employees.

In a seminal paper, Halevy, Norvig and Pereira (2009), argue that even simple theories and models, with big data, have the potential to do better than complex models with less data.

Data science, despite its hype laden veneer, is perhaps the best label we have for the cross-disciplinary set of skills that are becoming increasingly important in many applications across industry and academia. This cross-disciplinary piece is key: in my mind, the best existing definition of data science is illustrated by Drew Conway's Data Science Venn Diagram, first published on his blog in September 2010.