

Launching a Career in Data Science

Vema Academy Data Science Workshop

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Launching Your Career

What is Data Science?

Data Science is a multi-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from structured and unstructured data. [Wikipedia](#)

How do I land a career as a data scientist?

All data scientists

- Data Analysis / Exploratory Analysis
- Data Preprocessing
- Applied Machine Learning

How do I land a career as a data scientist?

Business data scientists

- Insight knowledge
 - Marketing
 - Strategy
 - Operations
 - Inversiting
- Domain knowledge
- Communication and presentations

How do I land a career as a data scientist?

Product Data Scientists

- Product knowledge
 - E-commerce
 - Entertainment
 - Banking
 - SaaS
- Software development basics
- Data pipelines

Building portfolio of real world projects

Steps

- 1 Learn the core skills for data science and applied machine learning - [Roadmap](#)
- 2 Pick out a dataset to start with - [Datasets](#)
- 3 Start your project in Jupyter Notebook.
- 4 Explore the data and make sure you understand the features.
- 5 Define an interesting objective to pursue
- 6 Clean the data, engineer features.
- 7 Complete your analysis / train your models.
- 8 Write about your project directly inside your Jupyter notebook.
- 9 Upload your project to Github. [Repeat 1 - 9](#)

Roles and Requirement

How much math should I learn for DS / ML?

- Probably very little Math foundation.
- Depends on your goal and learning approach.

Roles and Requirement

What makes a good data scientist?

- Always drive toward business value.
- Develop elite communication skills.
- Know when when NOT to use ML.
- Understand tradeoffs / deadlines.
- Focus on feature engineering.
- Consider themselves lifelong students

Roles and Requirement

Am I too old / too young to become a data scientist?

Anyone can become a data scientist, regardless of age, educational background, or prior work experience.

- Develop real skills.
- Build a portfolio of projects that help to prove the real skills.

Future Proofing Your Career

Career paths in data science

- Level Up
- Choose your own adventure

Future Proofing Your Career

Libraries / pre-existing solutions, or code from scratch?

For learning purposes, you can choose to code a few of your favorite algorithms from scratch.

Future Proofing Your Career

Coding from scratch - Advantages

- Learning how the algorithms works.
- Customizable implementation.
- Potentially faster implementations.

Coding from scratch - Disadvantages

- Higher math programming requirements.
- Takes a long time.
- Difficult to beat pre-existing libraries.

Future Proofing Your Career

Libraries and pre-existing solutions - Advantages

- Easier to learn.
- Much more commercial demand.
- Pre-optimized implementations allow you to focus on the application and building better models.

Libraries and pre-existing solutions - Disadvantages

- Cannot customize implementations.
- Cannot see each step of the algorithms.
- Limited in functionality by what's already there in the pre-existing library.

Future Proofing Your Career

How can I future-proof my skills and career?

- Opportunity assessment
- Creativity
- Domain expertise
- Nuanced decision making
- Empathy

Future Proofing Your Career

Making money from home / Are there remote opportunities?

- Freelancing: [UpWork](#), [Toptal](#)
- Remote roles in DS: [AngelList](#), [FlexJobs](#), [RemoteOk.io](#)
- Working with enterprise customers/ small businesses to solve really hard customer problems in the various domains. Doing consultancy work in data science.
- Work as part of a core ML/ Research team in an academic team at a major university.
- Writing technical articles, data science educational practice, and data blogging to teach, earn, and learn as well.
- Public speaking at paid large tech/ Machine Learning conferences, workshops, bootcamps, and meetups.

General Advice for

People/students with IT/business studies background

- 1 Data science is not only machine learning, analytical skills are crucial.
- 2 Skip most of the Math.
- 3 Be prepared for the mindset difference between software development and data science.
- 4 Domain knowledge can help you stand out big time
- 5 Practice your communication skills.

General Advice for

Someone with no relevant work experience

- Develop the real skills capable of driving business value.
- Follow a top-down approach.

