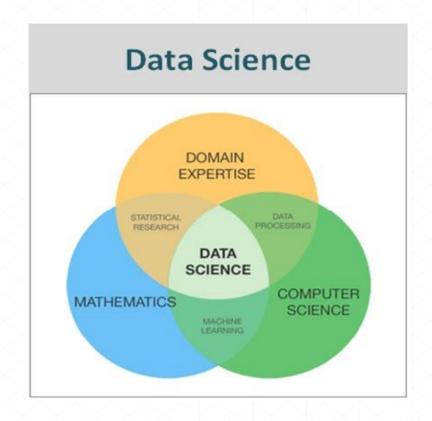






What is data science?







Multi-disciplinary field using:

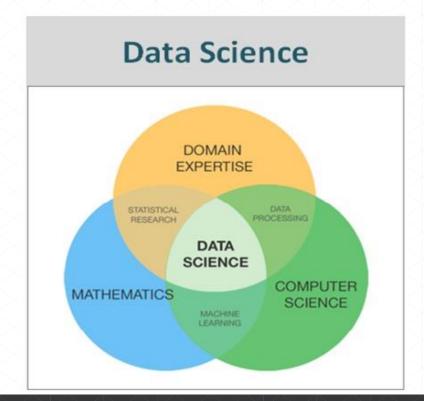
- Scientific methods
- Statistics
- Maths
- Algorithms

To:

Extract knowledge

From:

Datasets







"Data science is a new term in the same way as Columbus discovered a new continent"



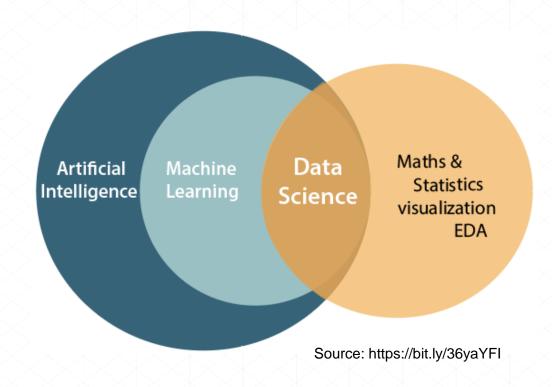
Hector Garcia-Molina
Professor in the Departments
of Computer Science and
Electrical Engineering of
Stanford University





Differences between

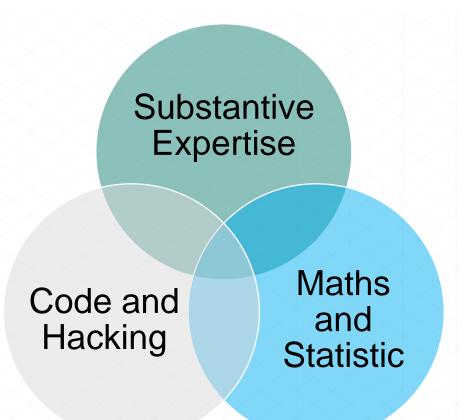
- Data Analysis
- Machine Learning
- Artificial Intelligence
- Non traditional Artificial Intelligence

















- Ask good questions
- Understand customers
- Define metrics that matter
- Make it feasible

Code and Hacking

Maths and Statistic





Substantive Expertise

- Ask good questions
- Understand customers
- Define metrics that matter
- Make it feasible

Code and Hacking

Maths and Statistic

- Model fitting
- Experimental Design
- Equations





Substantive Expertise

- Ask good questions
- Understand customers
- Define metrics that matter
- Make it feasible

- Get the right data
- Fix the dataset
- SQL
- Performance
- AI / Data Mining

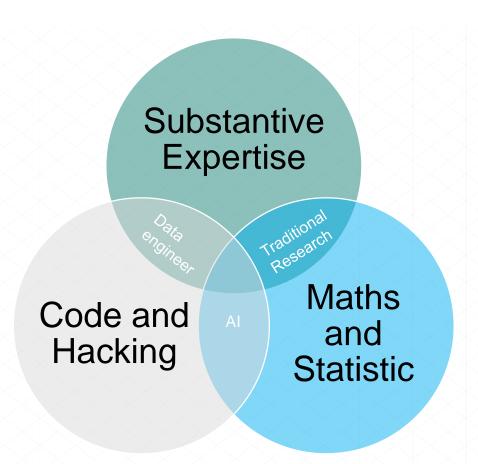
Code and Hacking

Maths and Statistic

- Model fitting
- Experimental Design
- Equations

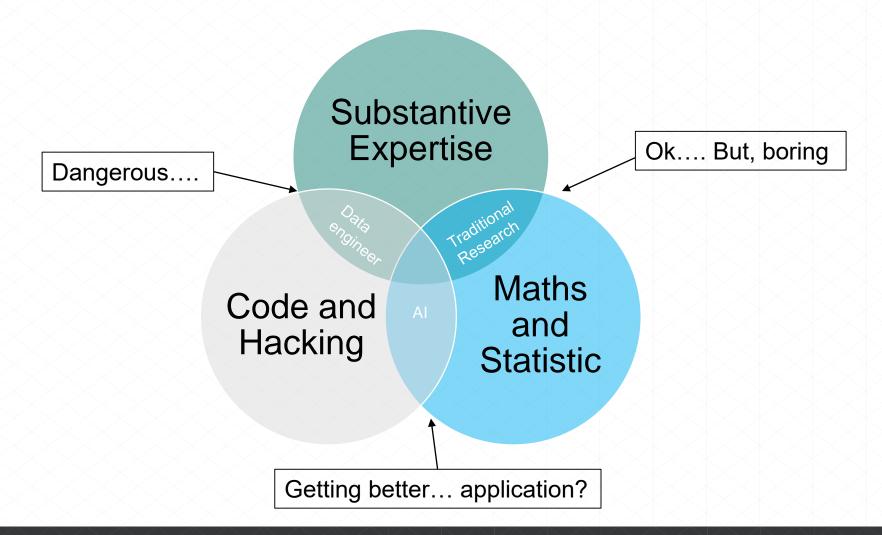






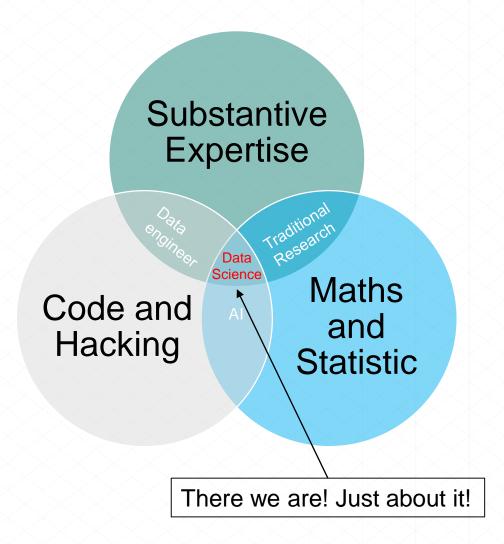


















Data | Data Scientist: The Sexiest Job of the 21st Century

Data

Data Scientist: The Sexiest Job of the 21st Century

Meet the people who can coax treasure out of messy, unstructured data. by Thomas H. Davenport and D.J. Patil

Harvard Business Review

The Dark Side of the Sexiest Job of the 21st Century

What is it like to be a data scientist?



In October 2012, a Harvard Business Review <u>article</u> described data scientist as the sexiest job of the 21st century. This article is not the reason why data science is so popular now but I'm pretty sure it motivated some people to become a data scientist.

Data Scientist: Still the "Sexiest Job of the 21st Century"?

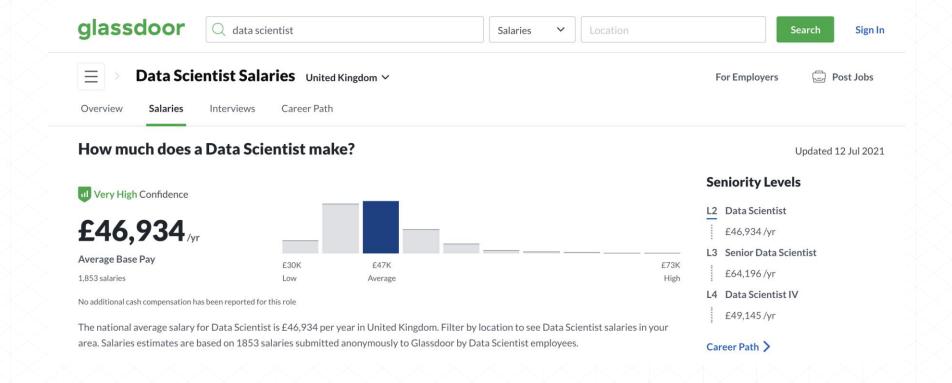
Corporate Blog

By Bob Laurent, Sr. Director, Product Marketing, Domino on November 19, 2020 in Perspective













Data Analyst

Business Administration Exploratory Data Analysis

Data Scientist

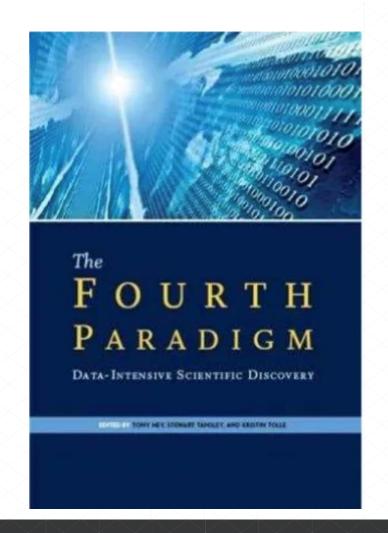
Exploratory Data Analysis Machine Learning and Al





Fourth Paradigm Science

- 1) Thousand of years
 - Empirical
- 2) Few hundred of years
 - Theoretical
- 3) Last fifty years
 - Computational
 - "Query the world"
- 4) Last twenty years
 - Data Science
 - "Download the world"







Just checking, are we on the same page?

- Why is data science so important?
- How is data growing?
- What is the value of data?







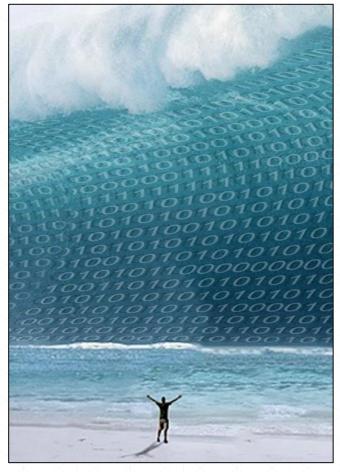
On average, every human created at least 1.7 MB of data per second in 2020

We created 2.5 quintillion data bytes daily in 2020

463 exabytes of data will be generated each day by people as of 2025

There were 4.66 billion active internet users around the world in January 2021.

Five hundred thousand new Tweets were posted every day in 2020 Facebook generated four petabytes of data every day in 2020 In 2024, the number of emails will be about 361 billion every day.



Source: https://bit.ly/3yRw9i3





Task - Applications and Companies using Data Science

Research current examples in one of the following areas:

- -Healthcare
- -Cyber Security
- -Digital Forensics
- -Social Media







What a data scientist is expected to be?







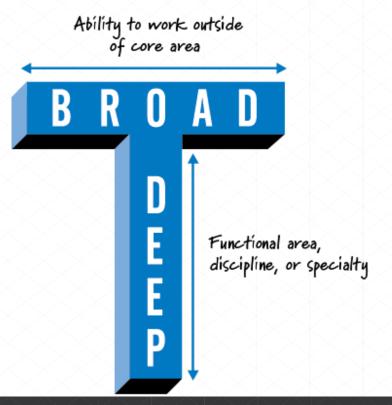
What a data scientist is expected to be?

a T





What a data scientist is expected to be?

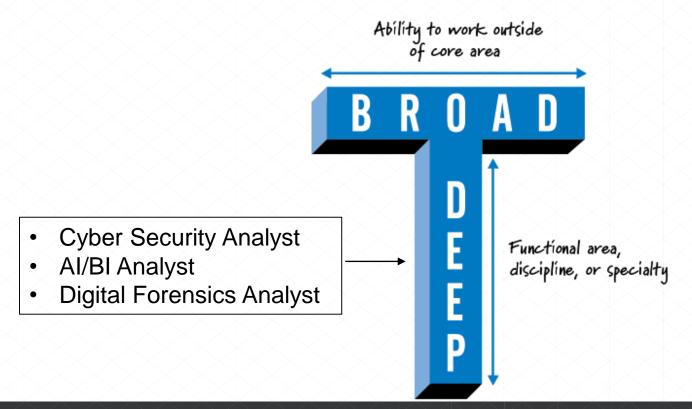








What a data scientist is expected to be?







Roles required in a Data Science Project



Data Engineer

- Data Integration
- ML



Visualisation Expert

- Storytelling
- Dashboards
- Graphs



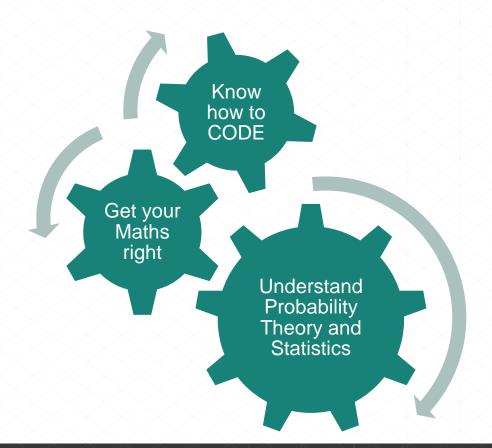
Project Manager

- Manage stakeholders expectations
- Facilitate





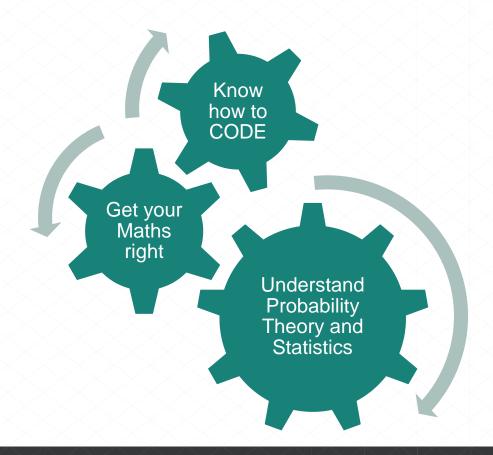
How to became a Data Scientist?







How to became a Data Scientist?





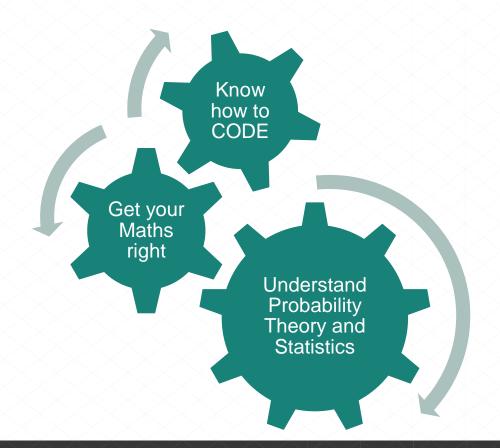








How to became a Data Scientist?

















Don't forget....

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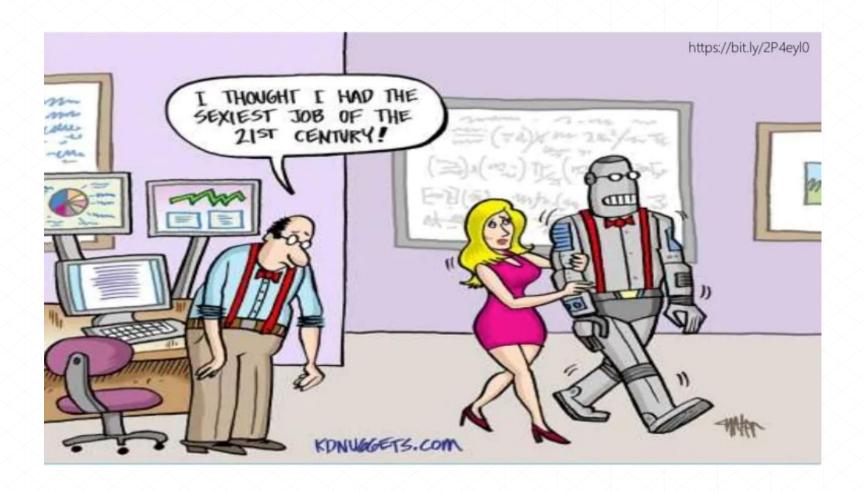
By Bob Laurent, Sr. Director, Product Marketing, Domino on November 19, 2020 in Perspective







However...







Post-Sessional Work

Coding recap and SPOJ - (https://www.spoj.com/)

ICPC - https://icpc.global/





References

Laguna State Polytechnic University, 'Introduction to Data Science', 22:07:27 UTC. Accessed: Jul. 13, 2021. [Online]. Available:

https://www.slideshare.net/fvsandoval/introduction-to-data-science-

164979975

Next Session!

Applications of Data Science





