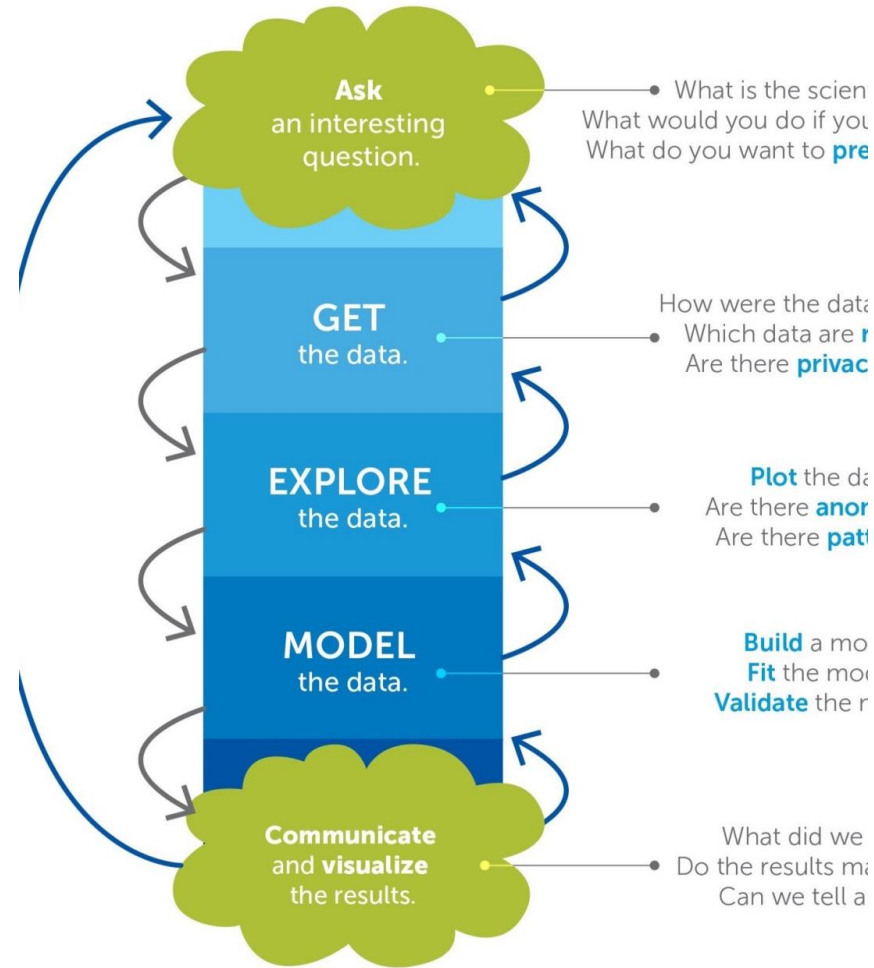# B.TECH (DATA SCIENCE)

B.Tech Data Science

Data science is an inter-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from many structural and unstructured data. Data science is related to data mining, deep learning and bigdata.

Data science is a "concept to unify statistics, data analysis, machine learning, domain knowledge and their related methods" in order to "understand and analyze actual phenomena" with data.

दृष्टि... आने वाले समय का आभास
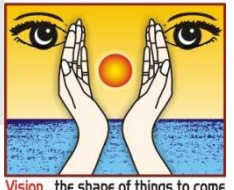
Vision... the shape of things to come

Data Science Anatomy

The Data Science Process

Ask an interesting question.
- What is the scien...
- What would you do if you...
- What do you want to pre...

GET the data.
- How were the data...
- Which data are r...
- Are there privac...

EXPLORE the data.
- Plot the da...
- Are there anor...
- Are there patt...

MODEL the data.
- Build a mo...
- Fit the mo...
- Validate the r...

Communicate and **visualize** the results.
- What did we...
- Do the results m...
- Can we tell a...

Derived from the work of Joe Blitzstein and Hanspeter Pfister, originally created for the Harvard data science course http://cs109.o...

- Data Science is about storytelling and making sense of numbers.
  - Data
  - Algorithm
  - Insight
- Teams
  - Data or Big Data Team will collect Data
  - The business intelligence team will provide a business insights Dashboard & Reports
  - The data science team will use some business analytics or data analytics tools to develop models that could predict future outcomes.
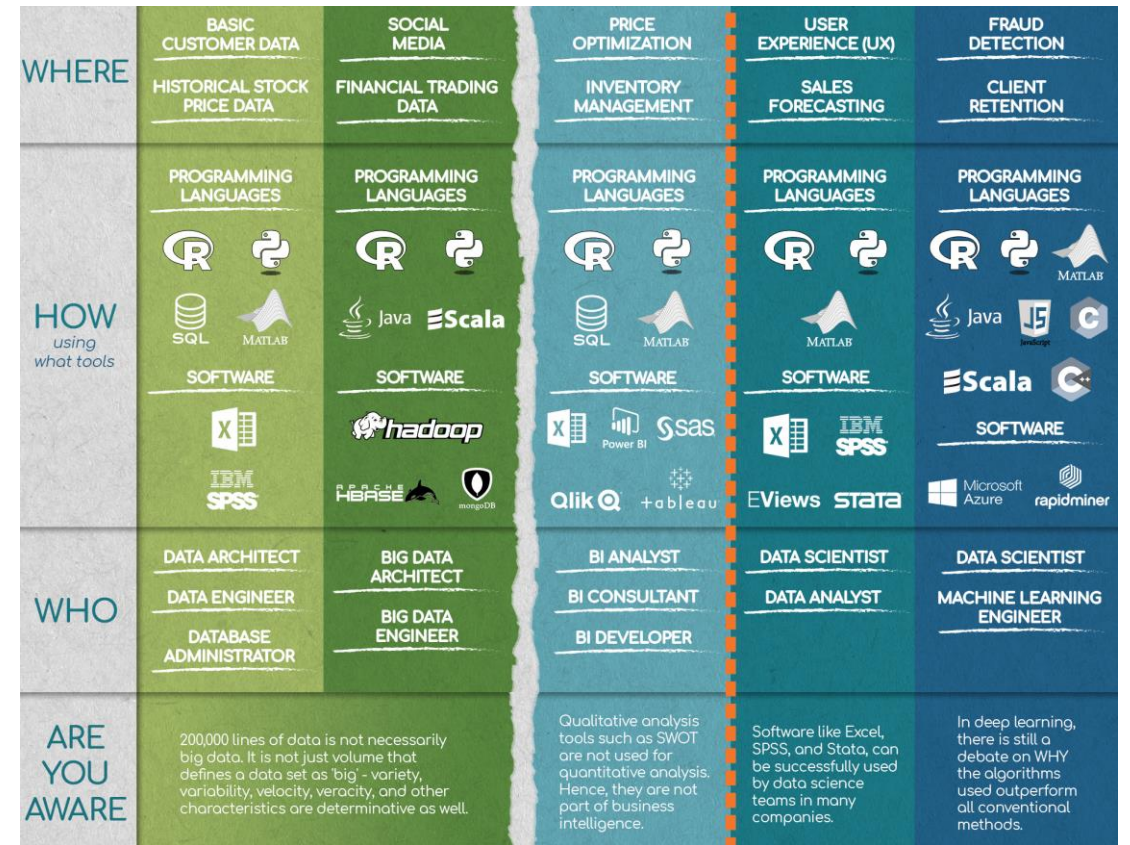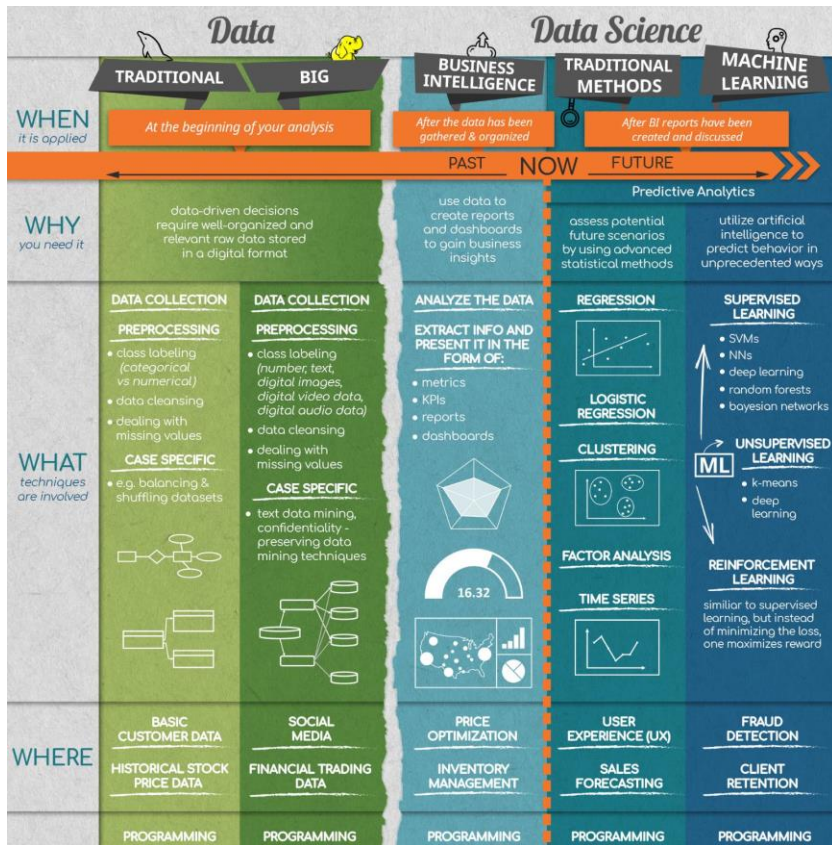
Few Buzzwords

- Analysis vs Analytics
- Qualitative vs Quantitative
- Business >> Data >> Machine Learning
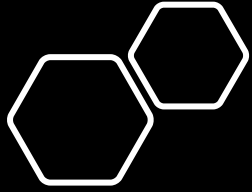- Business Intelligence (BI)
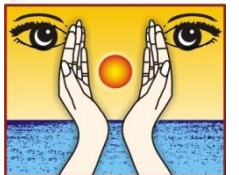
Complete Data Science Picture

Data Science in Organizations

- Role of Data Analytics across organization verticals
  - Marketing and Sales
  - Operations
  - Data-driven ventures
- Data Strategy & Impact
  - Strategy and value
  - Talent and organization
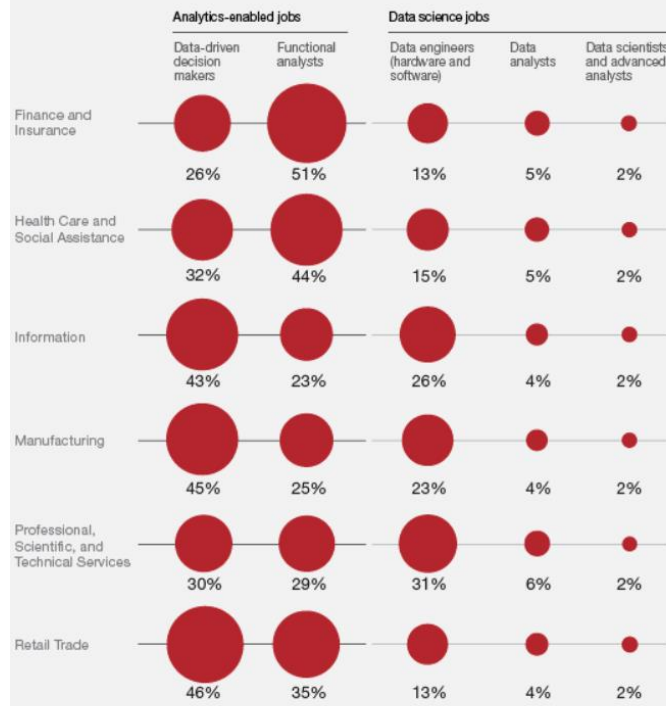 - Governance, access and quality
  - Technology and tools
  - Integration and adoption

Real Life Implementations

"High on the agenda is saving time, money and effort by optimizing supply chains, improving customer experiences and streamlining operations. "
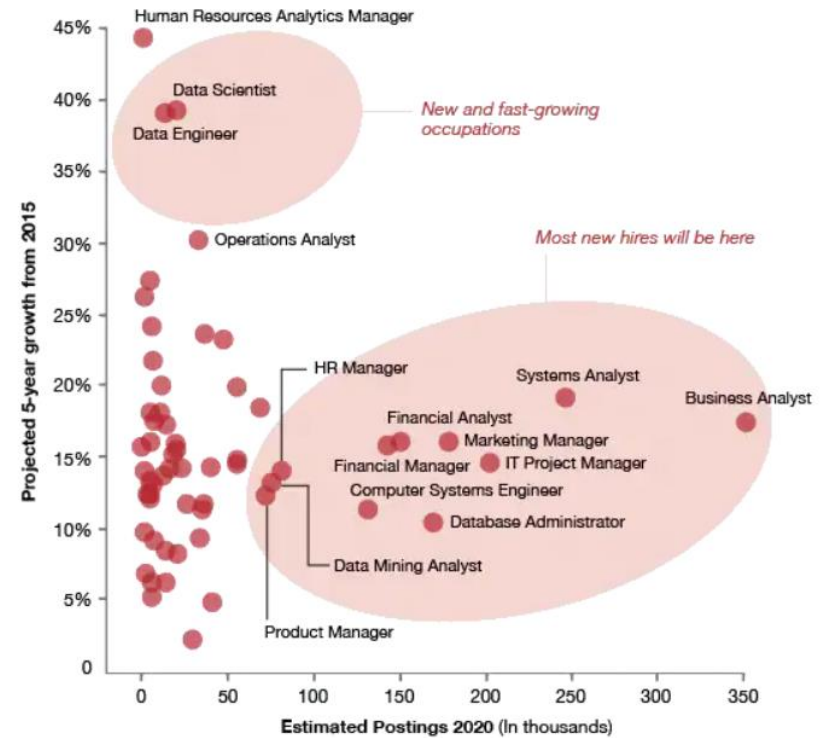
Chris Degenaar

EY Asia-Pacific Consulting Technology Leader

Which data skill sets are needed most in an array of industries