

MODERN DATA SCIENTIST

Data Scientist, the sexiest job of 21st century requires a mixture of multidisciplinary skills ranging from an intersection of mathematics, statistics, computer science, communication and business. Finding a data scientist is hard. Finding people who understand who a data scientist is, is equally hard. So here is a little cheat sheet on who the modern data scientist really is.

MATH & STATISTICS

- ☆ Machine learning
- ☆ Statistical modeling
- ☆ Experiment design
- ☆ Bayesian inference
- ☆ Supervised learning: decision trees, random forests, logistic regression
- ☆ Unsupervised learning: clustering, dimensionality reduction
- ☆ Optimization: gradient descent and variants



PROGRAMMING & DATABASE

- ☆ Computer science fundamentals
- ☆ Scripting languages e.g. Python
- ☆ Statistical computing packages e.g. R
- ☆ Databases: SQL and NoSQL
- ☆ Relational algebra
- ☆ Parallel databases and parallel query processing
- ☆ MapReduce concepts
- ☆ Hadoop and Hive/Hig
- ☆ Custom reducers
- ☆ Experience with xaaS like AWS

<https://www.linkedin.com/pulse/data-scientist-role-lucrative-future-secure-anjana-agrawal/>

DATA ENGINEER

SOFTWARE ENGINEERS BY TRADE

Role

Develops, constructs, tests and maintains architectures (such as databases and large-scale processing systems)

Mindset

All-purpose everyman



Languages

SQL, Hive, Pig, R, Matlab, SAS, SPSS, Python, Java, Ruby, C++, Perl

Skills & Talents

- ✓ Database systems (SQL & NO SQL based)
- ✓ Data modeling & ETL tools
- ✓ Data APIs
- ✓ Data warehousing solutions

HIRED BY



Salary of Data Engineer

1. Data Engineer

Glassdoor

Average Salary (2015): \$95,936 per year

Minimum: \$66,000

Maximum: \$117,000

2. Big Data Engineer

Robert Half Technology 2015 Salary Guide

Average Salary (2014): \$110,250 – \$152,750

Average Salary (2015): \$119,250 – \$168,250

Average Salary (2016): \$129,500 – \$183,500