

THE TALENT GAP IN Data Analytics

Data scientists are in high demand as companies across all industries try to leverage data to power business success.

This demand has created a serious data analytics skills gap and companies hiring data scientists face recruitment challenges. This infographic looks at the talent gap in data analysis and how companies can attract the best candidates.

Careers in Data Analytics

JOB OUTLOOK

11%

Employment growth
Employment of computer and research scientists is projected to grow 11% in the ten years from 2014 to 2024
☑ Significantly faster than growth for all occupations (7%)



82%

of U.S. organizations have or planned to have positions that require data analysis skills in 2016

72%

hired data analysis positions in the past 12 months

59%

expect to increase the number of positions requiring data analysis skills in the next five years

78%

report problems being able to recruit for data analysis positions in the last 12 months

83%

In 2016, 83% of data scientists reported a shortage in their field
☑ Up from 79% in 2015



SALARY



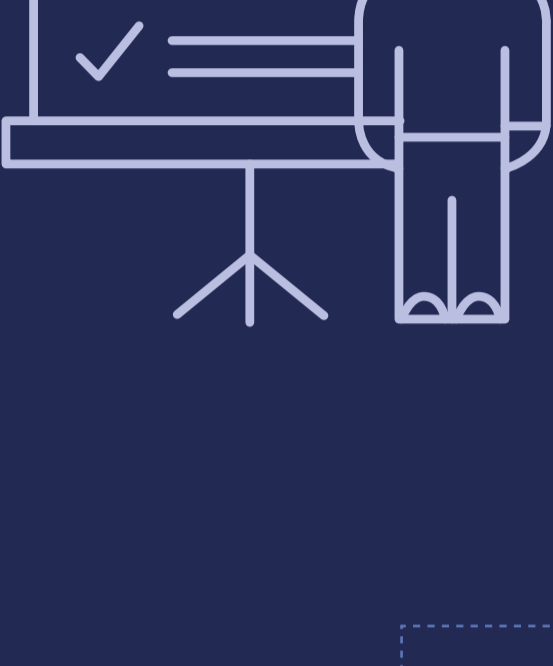
Entry level data scientists earn an average of **\$88,344**



National average salary for a data scientist is **\$113,436**



EDUCATIONAL PROGRAMS



649 4-year institutions offer at least one analytics program.

20%

of all 4-year educational institutions.

92% of data scientists have an advanced degree

44% have a master's degree

48% have a PhD

28%

of data scientists have a degree in statistics or mathematics

18%

have an engineering degree

17%

have a computer science degree

Talent Gap



Data scientists need a diverse skill set. Data scientists report spending most of their day doing the following job activities.

60%

cleaning and organizing data

19%

collecting data sets

9%

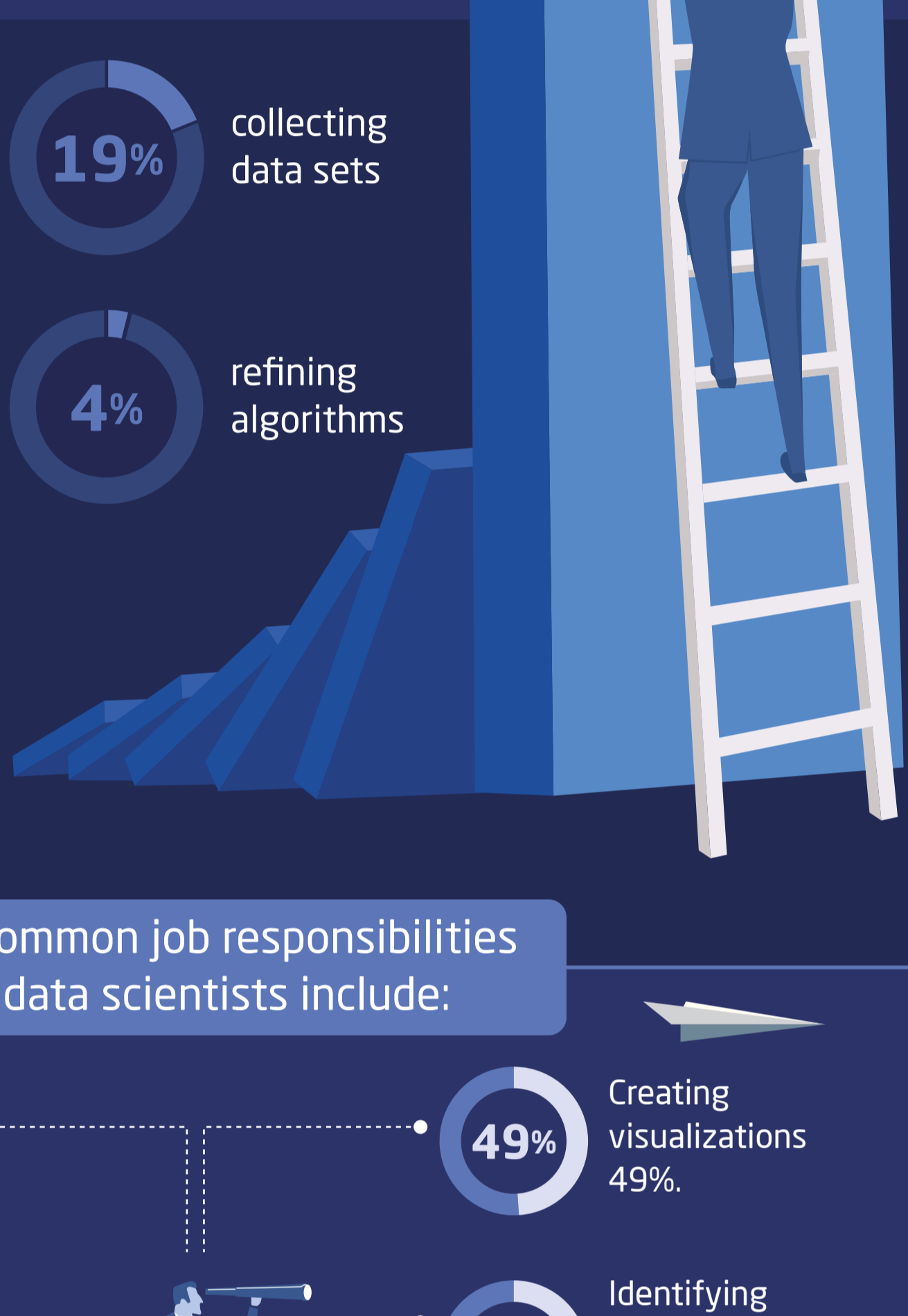
mining data for patterns

4%

refining algorithms

3%

building training sets



Most common job responsibilities for data scientists include:

69%

Exploratory data analysis 69%.

49%

Creating visualizations 49%.

61%

Conducting data analysis to answer research questions 61%.

47%

Identifying business problems to be solved with analytics 47%.

58%

Communicating findings to business decision-makers 58%.

43%

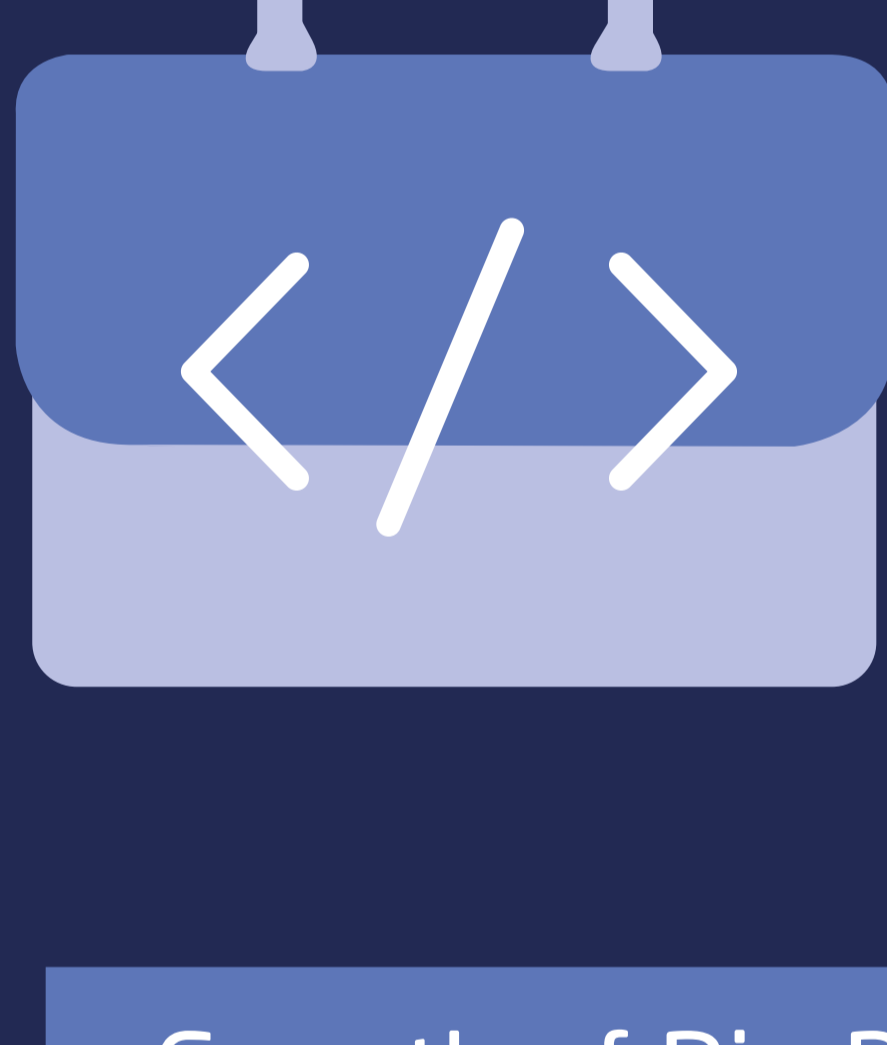
Feature extraction 43%.

53%

Data cleaning 53%.

43%

Developing prototype models 43%.



Top 5 in-demand programming language skills for data scientists.

56% of SQL positions listed this requirement.

49% Hadoop

39% Python

36% Java

32% R

Growth of Big Data

78%

78% of companies report that big data has the potential to fundamentally change the way they do business in the next 1 - 3 years.

71%

71% believe that big data will generate new revenue opportunities and/or lines of business for their company in the same timeframe.

58%

Only 58% agree or strongly agree that their company is positioned well to capitalize on the potential.

53%

53% of companies are implementing data-driven initiatives within the next year.

70%

70% of Fortune 1000 firms report big data is very important or critical to success.
☑ Up from 55% in 2014.

32%

32% see big data initiatives as being mission critical.
☑ Up from 23% in 2014.

2%

Only 2% of firms report that big data was not important to the firm.



RANGE OF INDUSTRIES DATA SCIENTISTS WORK IN

46%

Technology Industry

12%

Marketing

10%

Financial Services

8%

Corporate

5%

Healthcare/ Pharmaceuticals

8%

Consulting



Best Practices For Recruiting Data Scientists

Data scientist positions are plentiful and relatively easy to find

64%

of data scientist job applicants report finding a new job was easy or very easy.

Top 5 Recruitment Best Practices:

Partner with an academic institution offering a data analytics program.

• Mentoring and internship programs can create positive relationships with future graduates.

Remain flexible about skill requirements.

• With high demand and low supply, the chances of finding candidates with experience in every skill requirement is unlikely.

Invest in training and development programs for in-house talent.

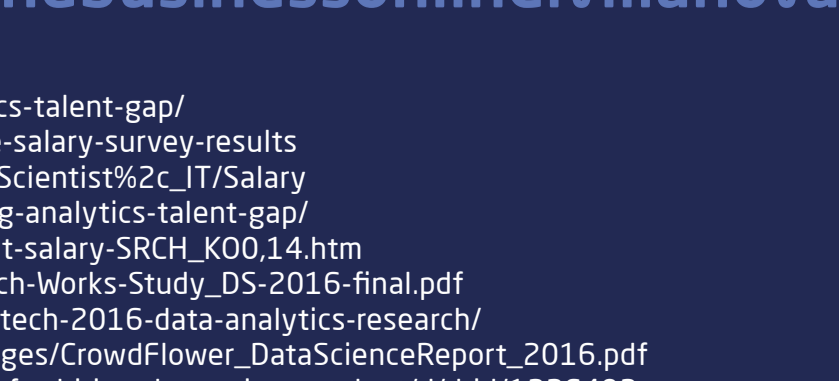
• Developing a talent pipeline in your own organization will build morale and fill the skills gap.

Work with specialized recruiters.

• IT recruiters already have a pool of qualified or near qualified candidates; utilize them.

Hire service partners who have qualified experts on staff.

• A trusted service partner with the required expertise can help bridge talent gaps.



taxandbusinessonline.villanova.edu

SOURCES:

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