

Research Assessment #1: **Career/Industry Research Forecast (Outlook)**

Job Title: Data Scientist

Job Description: A data scientist is a problem solver. They pull, merge, and analyze data to design data models, create algorithms, and predict evaluations from specific data given by a business. A big part of their job is working with stakeholders and explaining the data that is analyzed to help their business reach their intended goals. A big part of the job is to research and about new information daily as they are working to solve the problem by reading blogs, newsletters, and discussion boards.

Training, Education, and Certification: Having knowledge in python and java is beneficial for college and undergraduate majors for data science are in statistics computer science, information technologies, and mathematics. In addition, Masters and/or a Ph.D. in undergraduate degrees like computer science increase career opportunities. Data science is a field that is evolving and changing so it is important to always keep learning about new information, technology, and languages. Certifications in AWS, Oracle, and SAS are a great way to stay relevant.

College or Post High School Programs and Recommended High School Courses: Undergraduate majors for data science are in statistics computer science, information technologies, and mathematics. In addition, Masters and/or a Ph.D. in undergraduate degrees like computer science increase career opportunities. It is recommended to have a strong understanding of statistics, calculus, ad economics, and be exposed to languages before entering college.

National and Local Professional Organizations: Organizations that are the most notable are the Data Science Association, Association for Information Science and Technology (ASIS&T), Association for Information Science and Technology (ASIS&T), and INFORMS. These associations and organizations guide data scientists throughout their careers and are relevant with information as it evolves.

Related Areas: Areas related to data science with the same skill set include Data Architects, Data Engineer, Machine Learning Engineer, Data Analyst, Infrastructure Architect, Software Engineer, Business Analyst, Data and Analytics Manager, Data Mining Specialist, machine learning specialist, Database Developer, etc.

Salary: The annual salary right out of college is lower than the average salary. A starting salary of a data scientist is between \$50,000 to \$95,000. However, with more experience, the median salary is \$125,000. It is stated that there is a growth in data science over the past 5 years but is expected to grow an additional 14% in the next 10 years as well.

Career Outlook: The future outlook for this career is rising and is shown to be above average in the growth. It is projected to have a 14% growth rate in the next ten years. Data science is important in every niche and is slowly becoming nationwide. The highest paying salaries are in Washington, California, Texas, Virginia, and Maryland. However, Switzerland is the highest paying internationally with the best benefits.

Terminology:

The terminology that I need to become familiar with:

- Languages: different types of code like Python, JavaScript, SQL, etc.
- Big data: a theory that computing power doubles every two years.
- Algorithm: steps to accomplish a task or solve a problem.
- Artificial intelligence(AI): an ability that machines act intelligently
- Machine learning: the process where the machine learns and adjusts it behaves like a human used to test algorithm and helps computes predict answers/ feedback without human input.

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