DATA ANALYST

INTRODUCTION

Analysis refers to breaking a whole into its separate components for individual examination. Data analysis is a process for obtaining raw data and converting it into information useful for decision-making by users. Data is collected and analyzed to answer questions, test hypotheses or disprove theories

Skill Set

- Statistical Programming
- Programming Languages (R/SAS)
- Creative and Analytical Thinking
- Data Visualization
- SQL Databases
- Strong and Effective Communication
- Database Querying Languages
- Data Mining, Cleaning and Munging
- Advanced Microsoft Excel
- Machine Learning

EDUCATION PATH:

o Most candidates for entry-level jobs will need a bachelor's degree in math, statistics computer science, information management, finance or economics. All of these subjects place a heavy emphasis on statistical and analytical skills.

o Higher education degree in math, statistics, computer science, information management, finance or economics.

JOB PROSPECTS

- **IT Systems Analyst -** A systems analyst is an information technology (IT) professional who specializes in analyzing, designing and implementing information systems. A systems analyst is a person who uses analysis and design techniques to solve business problems using information technology.

- **Healthcare Data Analyst -** Healthcare Data Analyst to gather and analyze healthcare data from multiple sources (e.g. insurance processing, clinical operations, patient behavior) to extract trends and business insights. Building models and analyzing data to unearth trends and patterns and Presenting & explaining information, and suggesting improvements

- **Operations Analyst -** The operations analyst is a key member of the operations team supporting data management, client reporting, trade processes, and problem resolution. This person will work closely with the Client Support Services manager and the operations team to ensure integrity of the data systems.

- **Data Scientist -** Data scientists are analytical experts who utilize their skills in both technology and social science to find trends and manage data. They use industry knowledge, contextual understanding, skepticism of existing assumptions – to uncover solutions to business challenges.

- **Data Engineer -** Data engineers often focus on larger datasets and are tasked with optimizing the infrastructure surrounding different data analytics processes.
  For example, a data engineer might focus on the process of capturing data to make an acquisition pipeline more efficient. They may also need to upgrade a database infrastructure for faster queries.

- **Quantitative Analyst -** Quantitative analysts use data analytics to seek out potential financial investment opportunities or risk management problems.
  They may also venture out on their own, creating trading models to predict the prices of stocks, commodities, exchange rates, etc.

- **Data Analytics Consultant -** The primary role of an analytics consultant is to deliver insights to a company to help their business. While an analytics consultant may specialize in any particular industry or area of research, the difference between a consultant and an in-house data scientist or data analyst is that a consultant may work for different companies in a shorter period of time.
  They may also be working for more than one company at a time, focusing on particular projects with clear start and end dates

- **Digital Marketing Manager -** A digital marketing manager is responsible for developing, implementing and managing marketing campaigns that promote a company and its products and/or services. Marketers need to analyze traffic from websites and social media advertisements.

- **Project Manager -** Project managers use analytics tools to keep track of a team's progress, track their efficiency, and increase productivity by changing processes.

- **Transportation Logistics Specialist -** A transportation logistics specialist optimizes transportation of physical goods, and could be found in large shipping companies, like Amazon, UPS, naval transport companies, airlines and city planning offices.
A data analytics background is especially helpful in this job because transportation logistics specialists need to reliably identify the most efficient paths for products and services to be delivered. They must look at large amounts of data to help identify and eliminate bottlenecks in transit, be it on land, sea or in the air.

- ❖ **Future of data analytics and work on projects.**
- Data Management Association International (DAMA)
- Data Science Association
- Digital Analytics Association (DAA)
- International Institute for Analytics (IIA)
- International Machine Learning Society (IMLS)
- Institute for Operations Research and the Management Sciences (INFORMS)
- Association for Computing Machinery's Special Interest Group on Knowledge Discovery and Data Mining (SIGKDD)

SPECIALISATION

- Descriptive Analytics
- Diagnostic Analytics
- Predictive Analytics
- Prescriptive Analytics

TOP COLLEGE

- ➢ **VIT, Vellore**
  - **Course:** M.Sc. (Computational Statistics and Data Analytics)
  - **Eligibility:** First class with a minimum of 60% marks at 12th level/ intermediate/CBSE/ICSE/HSC or equivalent with Maths/Statistics/ Computer Science/Business Maths as one of the subject
  - **Selection Process:** 50% 12th marks + Counselling + Interview

- **Indian Statistical Institute, Kolkata**
  - **Course:** Bachelor of Statistics (Honours)
    - Bachelor of Mathematics (Honours)
  - **Eligibility:** an applicant must have successfully completed 10+2 years of Higher Secondary Education (or its equivalent) with Mathematics and English as subjects.
  - **Selection Process:** 2 Written Test + Interview

- **Chennai Mathematical Institute, Chennai**
  - **Course:** BSc (Honours) Mathematics & Computer Science
  - **Eligibility:** 10+2 years of Higher Secondary Education (or its equivalent) with PCM
  - **Selection Process:** Entrance Based

- **University of Petroleum and Energy Studies, Dehradun**
  - **Course:** BBA Analytics and Big Data
  - **Eligibility:** Minimum 50% marks in classes X & XII with Math as compulsory subject in class XII
  - **Selection Process:** Group Discussion & interview

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