Data Science: A Roadmap to Your Data Science Journey

Personality Characteristics

- Curiosity is key
- Make sound arguments
- Use good judgement
- Familiarize with analytics platforms
- Storyteller
- Know your area of interests (such as healthcare or IT)

Many Paths

- Diverse educational and career backgrounds
- Exposure to data challenges
- Sparked interest
- Data science is adaptable across professions

Data Literacy

- Analyze both structured and unstructured data
- Understand file formats
- Database and SQL skills
- Big Data, Cloud

Tools & Techniques

- Programming with Python and R
- Hadoop
- Python libraries: NumPy, pandas, scikit-learn
- Data visualization tools
- Machine learning algorithms
- Data preprocessing techniques

Foundational Skills

- Statistical knowledge
- Mathematics, Calculus, Linear Algebra
- Exploratory data analysis
- Select, train, and test models
- Communication and presentation skills

Range of Tasks

- Build Recommendation Engines
- Predictive Modeling
- Data Analysis and Problem Solving
- Identify Patterns
- Utilize External Data Sources
- Communication of Findings

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