DATA ANALYST ROADMAP

This is the Ultimate RoadMap to become a Data Analyst, one needs to learn the following things. I have added the resource links of all important things in this PDF.

DO YOU NEED A COLLEGE DEGREE?

With basic understanding of Maths, you can start. Even if you are not doing B Tech, Basic BSC Degree with Maths or some other equivalent will suffice.

REQUIREMENTS

- Excel
  - Basic Formulas: SUM, AVERAGE, MEAN, MEDIAN, SUMPRODUCT, CONCATENATE
  - Advanced Formulas: VLOOKUP, INDEX, MATCH, IF, COUNTIF, SUMIF
  - Remove Duplicates and Conditional Formatting
  - Charts, Filters, Sort, and Slicers
  - Pivot Tables and Pivot Charts
  - Exclude VBA, Macros, etc.
  - This course on Excel is amazing!
  - This course on overall MS Office is amazing too!
- Statistics + Maths
  - Arithmetic, Weighted average, Cumulative sum, Percentile
  - Linear Algebra Notes (Amazing Resource by Queen Mary University of London)
  - Learn the basics of Mean, median, mode, dy/dx. This quick video can help you get started.
  - Buy a copy of Hines Book (Probability and Statistics in Engineering by William Hines).
  - Focus a bit more on Normal Distribution
  - Learn basics of Optimization and Gradient Descent. You can watch this series I created long back.
  - Get this amazing book on Graphs (Play with Graphs Book – Amit Aggarwal)
- Programming
  - If confused choose Python as your first programming language
    - Python in Hindi – 100 Days of Code by CodeWithHarry
    - For English Lovers, there is this awesome course on Udemy
- Now once you have a basic understanding of Python, dive in deeper!
  - Learn Basics – Start from this free book or buy it on Amazon
  - Learn NumPy from here
  - Learn Pandas from 10 Minutes of Pandas here
- Data Visualization Tools
  - Power BI (Recommended for Microsoft product integration)
  - Tableau (Recommended for advanced dashboard capabilities)
- Database – Learn Basic CRUD Operations and depending upon how you are fetching your data, pick from these technologies.
  - MySQL + PhpMyAdmin
  - PostgreSQL (Optional/ Depends on your work)
  - MS SQL (Optional/ Depends on your work)
- Optional Tools that you can learn depending upon your requirements.
  - AWS – Create an account and get started for Free. It will take you a long time to master it
  - Learn about cronjobs from this video
  - Learn about BeautifulSoup for Web Scraping using Python
  - Linux