FULL STACK ACADEMY

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DATA ANALYSIS

1.Introduction to Data/Statistics
2.Python
3.Machine Learning
4.SQL (Structured Query Language)
5.Advanced MS Excel
6.Power Bi
7.Google Looker Studio
8.Tableau
9.Final Project

Duration: 3 Months

MODULE 1 : INTRODUCTION TO DATA / STATISTICS

- What is Big-Data ?
- What is no-code data analysis?
- Advantages and disadvantages of no-code tools
- Overview of top no-code data analysis tools

MODULE 2 : PYTHON

- Basics of Python, Operators, Conditional Statements,
- Looping Statements, Functions, Lambdas, Map Filter Reduce,
- OOP's, Classes and Objects, Modules, Libraries, Exception Handling,
- File Handling, Reading Data in python.
- Libraries Such as: Pandas Numpy Seaborn Matplotlib SweetViz AutoViz

MODULE 3 : MACHINE LEARNING

Machine Learning: Types of Learnings, Supervised Learning, Unsupervised Learning, Linear Regression, Cost Functions, Gradient Descent, Learning Rate, Evaluation metrics, Accuracy.
Classification: Logistic Regression, Decision Boundary, Cost Functions, Loss Functions, Overfitting, Underfitting, Regularization, SMOTE, Near-Miss Algorithm.
Introduction to Unsupervised Learning: Clustering, K-Means Algorithm, DB- Scan, Intuition of Kmeans and DB-Scan, Gaussian Distribution, Hierarchical Clustering, Evaluating metrics.

MODULE 4 : SQL

- Introduction to SQL, CRUD Operations, DDL, DML, DQL, DCL, Joins and various functions used for data retrieval.

TOP 5 A.I TOOLS ALONG WITH COURSE CONTENT :

CHATGPT MID JOURNEY NOTION

CO-PILOT BARD - GOOGLE

MODULE 5 : ADVANCED MS EXCEL

- Introduction to Excel, Advanced Functions and Formulas Data
- Analysis using pivot tables and Visualization techniques Advanced
- Chart Techniques and dashboarding Import data from a range of
- sources, including text files, databases.

MODULE 6 : POWER BI

- Connecting to data sources, Creating dashboards and reports
- Creating visualizations: Bar charts, Pie charts, Etc. Real-time data
- streaming capabilities. Relationships between tables and measures,
- and use DAX formulas. Advanced features: Calculations, Drill-
- through, and Hierarchies

MODULE 7 : GOOGLE LOOKER STUDIO

- Connecting to data sources, Creating dashboards and reports
- Exploring data: Views, Fields, and Filters
- Advanced features: Derived tables, Merged queries, and LookML.

MODULE 8 : TABLEAU

- Introduction to tableau, Why Tableau ?
- Charts and Analysis using Tableau

9 : FINAL PROJECT

- The final project will give students the opportunity to demonstrate their understanding of the tools by using one of the tools to create a project.