Data Science Curriculum

1. Introduction to Data Science and Its Importance

* What is Data ?
* What is Data Science ?
* Other Related Fields
* Importance of Data Science
* Types of Data
* Where to get Data
* What You Can Do With Data
* Digitalization and Digital Transformation

1. Defining Data

* How Data is Described
* Sources of Data

1. Basic of Programming (Python)

* Hello World!
* Arithmetic and Variables
* Functions
* Data Types
* Conditions and Conditional Statements
* Lists
* Loop and List Comprehensions
* Strings and Dictionaries
* Working with External Libraries

1. Introduction to Pandas

* Creating, Reading and Writing
* Indexing, Selecting and Assigning
* Summary Functions and Map
* Grouping and Sorting
* Data Types and Missing Values
* Renaming and Combining

1. Data Preparation

* Handling Missing Values
* Removing Duplicates
* Parsing Dates
* Scale and Normalize Data

1. Data Visualization

* Introduction to Seaborn
* Line Charts
* Bar Charts and Heatmaps
* Scatter Plots
* Distributions
* Choosing Plot Types and Custom Styles

1. Data Science Lifecycle

* Introduction to the Data Science Lifecycle
* Analyzing
* Communication

1. Project 1: Weather Data
2. Project 2: Covid-19 Data
3. Project 3: YouTube Data API