

Project Idea :

Analyzing the Impact of Caffeine Consumption on Youth & Addiction Patterns in the Digital Age.

This project focuses on analyzing how caffeine patterns influence youth lives, ranging from their daily performance to their physical and mental health related to today's fast-paced digital age.

Week 1: Build Data Model, Data Cleaning and Preprocessing

- **Tasks :**

- **Data Preprocessing:** Build a data model and clean/preprocess the survey data collected regarding caffeine habits and addiction indicators.

- **Tools:** SQL, Python (*pandas, Matplotlib*).

- **Deliverables:**

- Cleaned dataset ready for analysis.

- Data preprocessing notebook.

Week 2: Analysis Questions Phase

- **Tasks :**

- **Determine Data Analysis Questions:** Identify all possible questions regarding the impact of caffeine on productivity, stress, heart health, and sleep quality.

- **Analytical Focus:** How do digital-age lifestyle habits correlate with increased caffeine addiction?.

- **Exploratory Data Analysis (EDA):** Analyze trends, distributions, and correlations between variables.

- **Tools:** Python (*pandas, Matplotlib*), Excel.

- **Deliverables:**

- A documented set of analysis questions.
- Visualizations answering key analysis questions.

Week 3: Forecasting Questions & Risk Analysis Phase

- **Tasks:**

- **Determine Forecasting Questions:** Use trends to predict future health risks and high stress levels based on current addiction patterns & Is it possible to predict low productivity or high health risk based on caffeine intake and lifestyle habits?

- **Predictive Analysis:** Identify the "tipping point" where consumption shifts from a stimulant to a dependency.

- **Tools:** Python (scikit-learn, pandas, Matplotlib).

- **Deliverables:**

- Visualization plots answering forecasting questions.

Week 4: Visualization Dashboard and Final Presentation

- **Tasks:**

- **Build a Visualization Dashboard:** Create an interactive dashboard visualizing addiction patterns, stress indicators, and physical symptoms.

- **Final Presentation:** Prepare a comprehensive report summarizing the project findings and health recommendations for the digital generation.

- **Tools:** Python, Tableau, or Power BI.

- **Deliverables:**

- Interactive visualization dashboard.
- Final report and presentation.

Why This Project is Valuable? (Strong practical and academic impact)

Addresses a real health and productivity issue affecting youth and Combines data analysis + awareness.