**Employee Absenteeism Analysis**

**Overview**

This project aims to analyse absenteeism data of employees using three primary tables: absenteeism\_at\_work, compensation, and reasons. The analysis involves creating a comprehensive SQL database, importing the data, and transforming it for visualization in Power BI. The Power BI dashboard provides insights into absenteeism patterns, employee characteristics, and supports decision-making processes related to compensation and employee bonuses.

**SQL Database Setup**

• **Creating and selecting the Database:**

create database absent;

use absent;  
  
• **Changing Column Names:**

Removed spaces in column names for better query readability.

• **Healthy Individuals View:**

Created a view (v\_healthy) to filter healthy individuals based on criteria.  
  
create view v\_healthy as

select \* from absenteeism\_at\_work

where social\_drinker = 0 and social\_smoker = 0

and body\_mass\_index < 25 and

absenteeism\_time\_in\_hours < (select avg(absenteeism\_time\_in\_hours) from absenteeism\_at\_work);  
  
• **Final Joined Table:**

Created a final joined table for import into Power BI with derived columns for better analysis.

**Power BI Data Cleaning and Transformations**

• **Data Type Adjustments:**

Adjusted data types to ensure proper analysis.

Created derived columns like Month Name, Day Name, Education Level, Work Load bucket, etc.

**• Base Measures:**

Defined base measures like Total Absent Hours, Average Absent Hours, Total Employee Count, Non-Smoker Count, Annual Compensation Increase, Hourly Compensation Increase.

• **Charts and Visuals:**

Utilized various visuals including Line Charts, Table, Donut Chart, Scatter Plot, and Card Visuals for KPIs.

**Key Metrics and Inferences**

• **Overall Absenteeism:**

Total Absent Hours: 5124, Average Absent Hours: 6.92.

**• Employee Details:**

Total Employees: 740, Non-Smokers: 686.

• **Compensation Increase:**

Annual increase for non-smokers: $1433.27.

**• Monthly and Daily Trends:**

January & February show low absenteeism.

March has a steep surge; July shows the highest average absent hours (10.6).

**• Primary Reasons for Absenteeism:**

Top reasons: Medical consultation, dental consultation, physiotherapy.

**• Absenteeism by Demographics:**

Adults contribute 81.05%, young adults 13.84%, and seniors 5.11%.

BMI Category: Overweight (46.47%), Healthy (33.8%), Obese (19.73%).

**• Relationship Analysis:**

Slight positive correlation between workload and absenteeism.

No apparent relation between transportation expense and absenteeism.

**• Healthy Individuals Bonus:**

Provided a table of healthy individuals who will receive a $1000 bonus.

**Conclusion**

This project provides a comprehensive analysis of absenteeism, offering insights into trends, employee characteristics, and potential correlations. It serves as a valuable resource for making data-driven decisions related to employee well-being and productivity.