

One-Page Summary of Projects

This document summarizes four diverse projects, each showcasing a range of data analysis and visualization techniques aimed at deriving actionable insights across different domains.

Project 1: Customer Insights with Tableau

This project focuses on enhancing retail marketing strategies using a dataset rich in demographic and behavioral information. After thorough data cleaning using advanced Excel functions, key metrics were visualized through an interactive Tableau dashboard. Insights include gender-specific spending patterns, age-related purchasing habits, and regional profitability. For example, men were identified as higher spenders on clothing and accessories, and Montana emerged as a strong market. These findings enable businesses to refine marketing and inventory strategies effectively.

Project 2: Sales Analysis with SQL

Leveraging the AdventureWorks dataset, this project uses SQL to analyze sales data, focusing on trends, product performance, and regional variations. Insights were visualized using SandDance, with visuals such as bar charts and treemaps. Key findings include monthly sales trends, top-performing product categories, and country-specific sales performance. The project highlights SQL's power in enabling data-driven decisions for optimizing inventory and marketing efforts while uncovering region-specific demands.

Project 3: Music and Mental Health with Power BI

This exploration uses the Music & Mental Health Survey dataset to analyze the relationship between musical preferences and mental well-being. Data cleaning and transformation prepared the dataset for visualization in Power BI. Findings reveal patterns of how different musical habits affect mental health conditions like anxiety and depression. Insights include the impact of genre preferences and listening habits across various age groups, emphasizing music's potential role in promoting mental well-being.

Project 4: Employee Performance Analysis with Python

This project analyzes employee performance data, focusing on workload distribution, overtime, and productivity. A Python-based approach addressed missing values, inconsistencies, and duplicates, followed by visualization of workload by department, overtime patterns, and productivity correlations. Key insights include identifying employees with excessive overtime and understanding the relationship between hours worked and efficiency. The project underscores Python's utility in automating data cleaning and uncovering productivity trends.