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ESRM 6990V

**Project Proposal: Financial Data Analysis of a Building Services Company**

**Introduction**

This project aims to analyze the financial data of a building services company where I have been employed for 25 years. The primary research question is: **What predictor variables influence net income?** Identifying these key factors will provide insights into financial trends and potential areas for optimization.

**Data Collection and Preparation**

Financial datasets from **2019 to 2024** will be extracted from QuickBooks and imported into Excel. The following steps will be taken to ensure data integrity and confidentiality:

* **Data Cleaning & Transformation**:
  + The datasets will be transposed and merged into a single, structured dataset for analysis.
  + In compliance with the business owner’s confidentiality request, account names and the company name will be anonymized.
  + Accounts will be categorized into four main sectors: **Commercial, Industrial, University, and Medical.**

**Data Analysis Approach**

To determine the factors influencing net income, the analysis will include:

1. **Regression Analysis**: A full regression model will be used to identify significant predictor variables.
2. **Descriptive Statistics**: Summary statistics will be provided to highlight key financial trends, including:
   * The number of accounts per sector
   * Distribution of revenue across different sectors
   * The most influential variables affecting net income
3. **Visualization**: Graphs and charts will be used to effectively present findings from both the descriptive statistics and regression model.

**Project Timeline**

| **Phase** | **Date Range** | **Tasks** |
| --- | --- | --- |
| **Proposal Submission** | March 31 - April 4 | Submit project proposal for approval |
| **Data Preparation & Cleaning** | April 7 - 11 | Extract, clean, and categorize datasets |
| **Data Analysis & Visualization** | April 7 - 11 | Conduct regression analysis and create visual representations |
| **Report Writing** | April 11 - 17 | Write and finalize the project report |
| **Presentation Preparation** | April 17 - 22 | Develop and finalize the project presentation |

**Expected Outcomes**

By the end of this project, I expect to:

* Identify key predictors of net income in the company’s financial data.
* Provide clear visual insights into financial trends and sector performance.
* Deliver actionable findings that could help improve financial decision-making.