Corporate Financial Strategy Model

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1 Project Introduction

Many businesses, particularly SMEs and startups, accumulate surplus capital but lack a systematic approach to allocate it effectively. Studies indicate that excessive debt negatively impacts profitability, and a significant number of firms retain earnings without a strategic plan of use. Poor capital allocation decisions have led to under performance in companies with substantial resources. These challenges underscore the need for a data-driven model to guide optimal capital allocation decisions."

The goal of this project is to develop a machine learning algorithm that recommends optimal capital allocation, specifically: debt repayment or expansion investment, or RnD investment, based on financial performance indicators such as: price to earnings and debt to equity ratios, return on investments (ROI) and revenue growth.

2 Project Plan

2.1 Process

Build a classification model using historical financial data, specifically financial indicators (P/E ratio, D/E ratio, ROI, etc), to predict the most beneficial use of surplus capital.

2.2 Data and Technology Use

Data will be collected from trusted sources such as Yahoo finance to collect accurate ratios and financial indicators

The technology that will be used is as follows:

Pandas	Data loading and cleaning
SQL	Data storing
scikit-learn	Model training
matplotlib	Visualization

example of a decision tree that will be trained

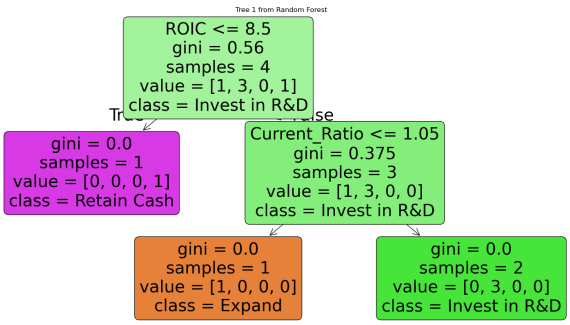

Figure 1: Decision Tree

References