Bill.com Vision Statement

Recommendation Monkey

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-What is the project about

Deliver recommendations telling a business user whether or not they should invest time and resources into a specific set of industries and entities for a given business archetype. Provide mathematical explainability supporting the recommendations.

-Why is the project important?

There is currently no widespread method for analyzing smaller industries of a business archetype for investing purposes, but they do exist for larger businesses. Using Bayesian statistics and research data our project can offer a quantitatively and qualitatively supported recommendation to a business user.

-How was this solved before?

In business, people manually enter data into SaleForce, a customer management relationship cloud app to collect customers . Weekly

-Identify the Outcome of the Project

- Identify top three quantified attributes/features derived from the customer financial data relative to industry supplied that supports or refutes investing more BDC time and money into the industry
    - Apply statistics to the data to search, identify, and recognize the top 3 attribute/feature patterns that show increasing customer revenue (positive rise over run), negative growth, neutrality
        - Scatter diagram plots
        - Regression analysis against scatter diagrams
        - Bayes Theorem
    - Calculus
        - Objective is to mathematically characterize these lines
        - Scatter diagram displaying a regression line by industry on same graph
            - Characterize these industry regression lines
                - Plateaued
                - Increasing at an increasing rate over X%
                    - X% is a user defined value entered in Jupyter
                    - Default value = 20%
                - Decreasing at an increasing rate over Y%
                    - Y% is a user defined value entered in Jupyter
                    - Default value = 20%

-Define initial Project Milestones

- Week 5: Have a functional MongoDB we can query using python and display on Jupyter
- Week 6/7: Build Reports and work on Statistical Math
- Week 8/9: Finish Report Building and work on Real Statistical Analysis
- Week 6-9: Focus on backend and stats(BDC customers financial data) for actual predictions and analytics. Fine tune models with 2017 BDC results.

-How do you plan to articulate and design a solution

Implementation platform & technologies: Jupyter Notebook, MongoDB (5.0.3)

Statistical based Python Machine Learning/Deep Learning models.