

# Project Proposal

## Application Development

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#### Team members

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#### Project Description

##### Brief:

Currently, most of the computation and reporting of financial metrics is done using Microsoft Excel, where the data may be copied or entered manually in a redundant manner to produce relevant visualization and tables.

This project will automate the reporting and comparing of key financial matrices of public listed companies, on Pakistan Stock Exchange (PSX), of Pakistan where user may view the updated data and visuals as published by the State Bank of Pakistan (SBP) on its website.

##### Scope:

For the purpose of this project, we will cover the reporting of key metrics of companies at an aggregate level.

Later, we may add industry level projections, comparisons among the competitors, forecasting for industry and at company levels (provided key inputs by the users) and other financial factors.

#### Dataset

[Annually update data set of Financial Statement Analysis of listed Companies at PSX issued by State Bank of Pakistan.](#)

#### Python libraries

- Tabula: To extract data from pdfs if needed.
- Pandas: To clean and manipulate data.
- Plotly (or other relevant library): To create interactive visualization,
- Flask: To develop the webapp.

## Features

- **Data level:**
  - A set of tabular data will be maintained for all financial accounts and matrices with respect to each year.
- **Visualization:**
  - Interactive visualization will be created where user can interact with visuals and seek the metrics of time period he seeks. For example: Line graph of deposits in Banking sector from the year 2020-2021
- **Real world aspect:**
  - Visualization and data sets shown on web app will related to the real world needs of analyst working in financial sector.