Data Warehouse Project of Financial Companies That Issued PPP Loan

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Team Members

- **Christian Sierra Perez** - Project Manager

- **Ziqi Polimeros** - Senior Data Analysis

- **Tiffany Tran** - Data Analysis

Background

- The **Paycheck Protection Program** (PPP) is a $953-billion business loan program

- Established by the government during the Trump administration in 2020 through the **CARES** Act (Coronavirus Aid, Relief, and Economic Security)

- Intended to help certain nonprofit organizations and businesses, self employers, sole proprietors, and tribal businesses

- Program allows them to apply for low-interest loans for payroll and other costs

- The loan for each applicant was approximately 2.5 times the average monthly payroll costs

- Some applicants received a second loan, typically similar to the first one to cover other costs (rent, interest, utilities, etc.)

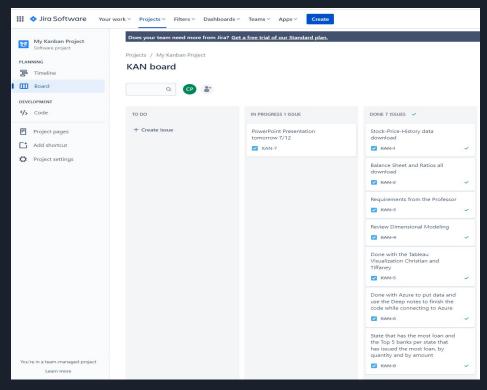- Can be partially forgiven if the business keeps employee counts and wages stable

Users Benefits

- Enhanced data quality and consistency
- Provides a stable and central repository of all the data
- Improves business processes and decision making
- Provides insights on the different small business that were affected by covid-19
- Allows users to see
  - The effect of the PPP loan on the businesses
  - The different outcomes that came about the loan
  - The financial impact before and after the loans
- Helps users come to conclusions about the different factors that may be affecting the business
- Ultimately help to make decisions based on the information revealed from the data

Kanban Methodology

Kanban Methodology is an agile method that aims for continuous improvement, task management flexibility, and improved workflow.
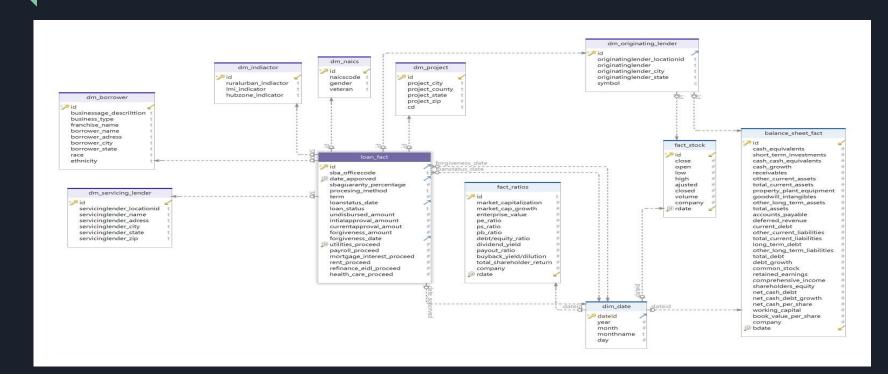
Dimensional Modeling

Tableau Visualization

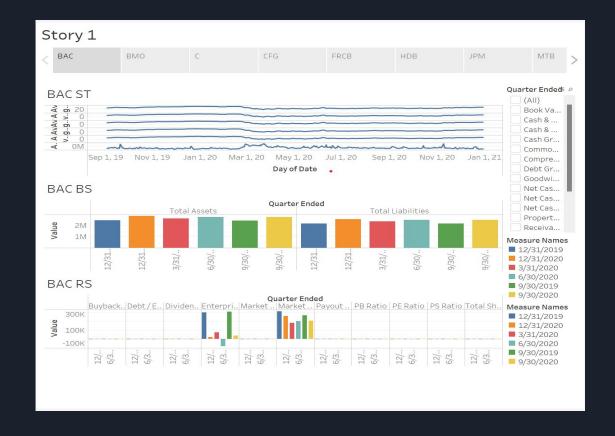# Data Visualization – Stock Price

- <u>Data Source:</u>

  Yahoo Finance.

- <u>Data Extraction:</u>

  Web scraping through Python

- <u>Data Transformation:</u>

  Data cleaning, data filtering,
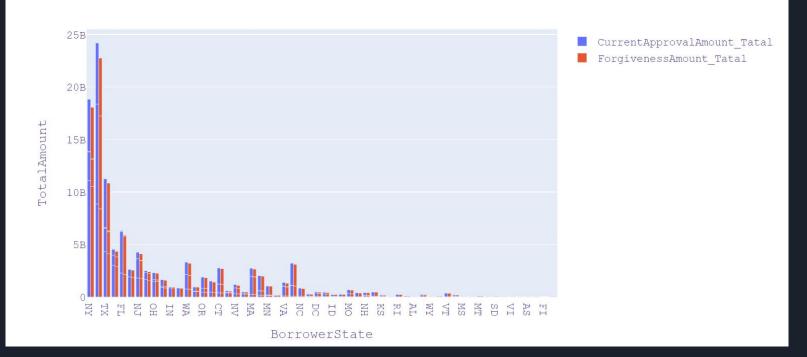 data analysis.

- <u>Data Storage:</u> Azure

BAC Adjust Close Stock Price History vs. Volume (2019.9 - 2020.12)

Data Visualization – PPP Loan

Insight

CurrentApprovalAmount VS. ForgivenessAmount of Top Five Bank per State

Future Work

Data Maintenance and Update:

- Real-time Update

- Increase Company Options

- Test and Validate

- Deploy and Monitor

- Ensure Data Security and Privacy

List of Links for Our Term Project

Github Link:

https://github.com/Christ244/CIS4400

Deepnotes Link:

https://deepnote.com/workspace/cis4440-af30dd6c-7034-49d4-8ffd-f5f64dc5d870/project/KXW-ca436d51-26cb-4a7b-9af3-0ce82bc99b1b/notebook/christian_tiffany_ziqi-28eecb5ebd224e84830d08c034d50ea3

Project Powerpoint:

https://docs.google.com/presentation/d/1KXKwsI8TYJ0FEIYt7-qRqH4FOfVE9nB4tE4OsMCjMhQ/edit?usp=sharing