

DEV 10 CAPSTONE

PAYCHECK PROTECTION PROGRAM (PPP): LOAN DECISION ANALYSIS LED BY DATA

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Agenda

1. Introduction
2. Initial Questions
3. Research Process
4. Dashboard
5. Machine Learning
6. Recommendations

The Paycheck Protection Program (PPP)



About the program

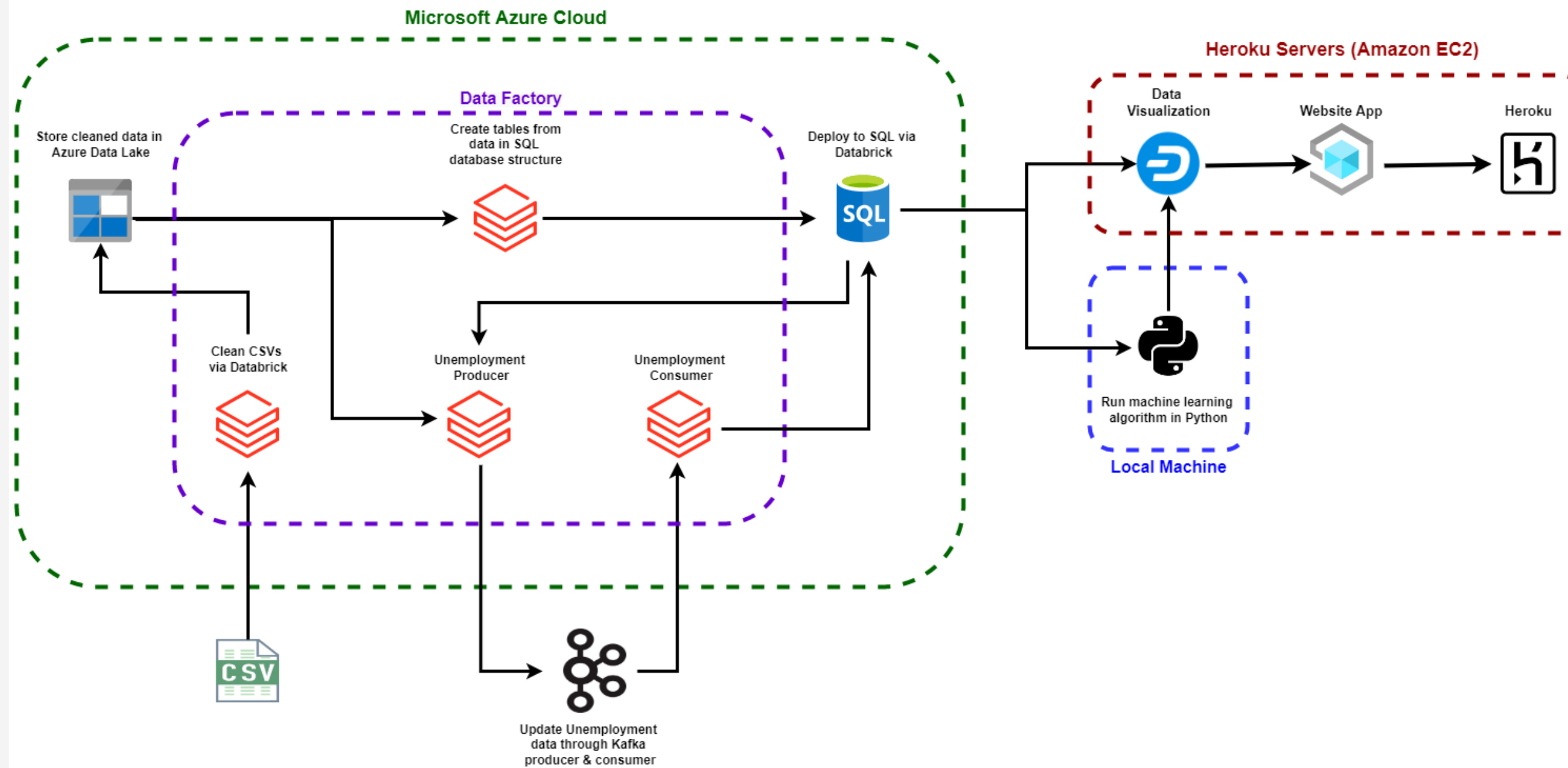
As the global pandemic COVID-19 hit the U.S. Economy in 2019, the United States government implemented an unprecedented and large-scale solution to keep businesses (and by extension, their employees) afloat. The Paycheck Protection Program (PPP), which ran from March 2020 through April 2021, allowed businesses to take out loans backed by the federal government. The government intended for these loans to keep businesses solvent and employees on their payroll during the span of the pandemic.

Initial Questions

1. What types of business owners (gender, race, geography) received Paycheck Protection Program loans?
2. Which industries (based on Census NAICS codes) received the largest amount of loans?
3. How did businesses in each state and industry use the loans they received?
4. Was the quantity of loans given proportional to the demographic breakdown of business in each state/industry?
5. Which businesses in each state/industry paid off their loans? Which businesses had their loans forgiven?
6. Who were the top lenders to businesses in each state and industry?
7. What is the relationship between the number of PPP loans given by state and that state's unemployment numbers?
8. Based on predictive modeling analysis, how likely is a particular business to pay back their loan?

Research Process & ETL

Payment Protection Plan Data Platform Diagram



Onto the dashboard!

Recommendations for research

How can other loans programs learn from our analysis to succeed in supporting more minority groups?

How can the relative success of the PPP assist policy makers in mitigating unemployment in the future?

Would it be worth demonstrating specific employee payroll requirements during the loan application process to ensure that funds are being properly allocated to keep employees on staff?

How can the SBA be more transparent in its forgiveness process to improve the experience for both lenders and borrowers?

Thank you!

Floor is open for questions



Group Members

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GitHub

<https://github.com/emilyatk13/dev-10-capstone.git>



Resources

PPP:

<https://data.sba.gov/dataset/ppp-foia>

Census:

<https://www.census.gov/data/developers/data-sets/abs.html>

Unemployment:

<https://oui.doleta.gov/unemploy/claims.asp>