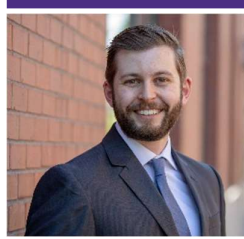


# REIMAGINING PUYALLUP'S ECONOMY

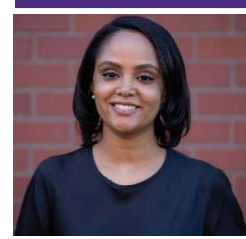
Team  
B5



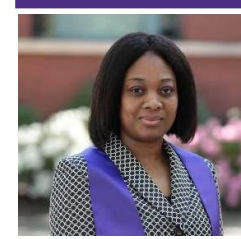
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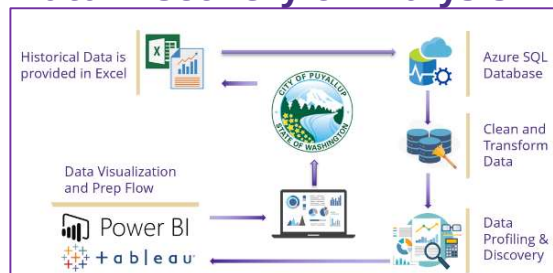
## Project Background

The City of Puyallup would like to gain deeper **insights** into their historical **sales tax revenue**, identify opportunities for **revenue growth**, & find ways to **increase** their **economic resilience** to **recessions**.

## Project Scope

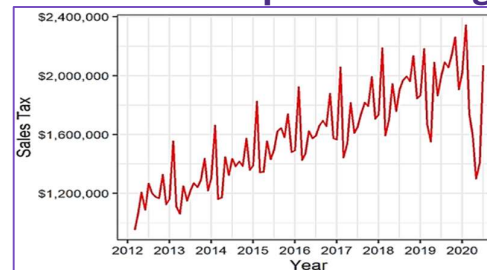
- ✓ Predict sales tax revenue,
- ✓ Perform Descriptive & Diagnostic Analytics,
- ✓ Create Power BI demographics dashboards,
- ✓ Create Text Analytics Word Clouds and Sentiment Analysis,
- ✓ Create automated chatbot.

## Data Discovery & Analysis



The city provided ten years sales tax data. The team performed data transformation, analysis and create visualizations.

## Descriptive & Diagnostic Analysis

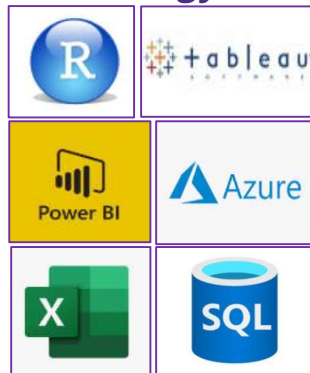


Steady trend and clear seasonality are noted and the significant dip in 2020 is due to COVID-19. We created a time series regression to predict future revenues.

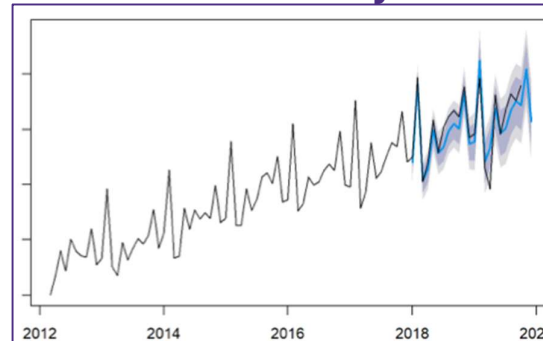


Developed a Power BI Dashboard that highlights factors contributing towards cost of living in Puyallup, which is a significant decision factor for businesses.

## Technology Used

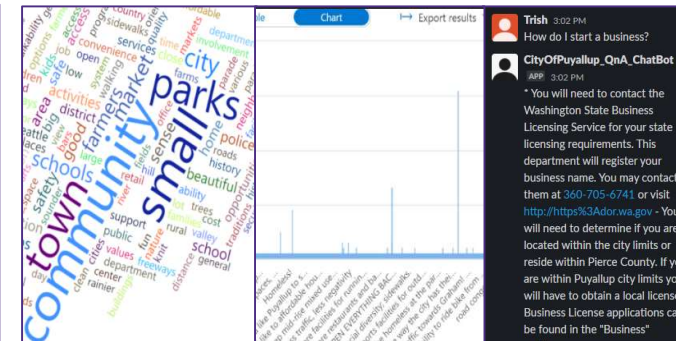


## Predictive Analysis



Predicted future sales tax revenue by quantifying the relationship between the key economic indicators and the sales tax revenue using the SARIMA (seasonal ARIMA model) with exogenous variables.

## Cognitive Analysis



Created Text analytics Word Clouds and Sentiment analysis using azure API using 2020 vision survey.

Created automated Q & A chatbot that answer FAQ and guide users.