

### **Abstract**

With Covid-19 impacting businesses in the US, the government urgently released PPP loans to help businesses survive under the unexpected challenges from Covid 19, launched by the U.S. Small Business Administration in March 2020. However, some small businesses that applied didn't get a loan. This study identifies potential reasons why these loans weren't approved to help small businesses increase their chances of getting a loan. Starting with Power BI to conduct exploratory research and identify the most relevant variables and Python to develop a classification model that predicts whether a loan would be accepted or denied with an accuracy of 99%. From the conducted exploratory data, it is noted that 99% of the declined loans were in 2021, and some of the top counties in Georgia have a higher chance of African-American owned businesses to have their loans rejected than approved potentially due to financial reasons and weaker long-term bank relationships. We also found a much higher percentage at 66% of denied loan applications for sole proprietorship businesses versus roughly 40% approval rate. Another notable insight is that ~44% of the rejected loan applications were from Capital Plus and Prestamos, two private banks that have claims of potential fraud against them. In conclusion, having developed a model with a high accuracy rate and 0.95 Area Under the ROC Curve(AUC), we feel confident in the potential our model and insights have to help small business owners survive future economic crises.