NYC TLC A/B Test for Credit Card vs Cash Payments

Use hypothesis testing to determine if Credit Card payments result in a higher total fare amount.

OVERVIEW

- Test weather credit card payments are higher than cash payments.
- Because tips are not recorded for cash payments, we eliminate tips from credit card payment total amount to get a more accurate result.
- Trips were placed into 2 groups:
  - paid with credit card
  - paid with cash.
- Two-sample t-test performed to see whether there is a statistically significant difference between total fare amounts for customers who paid with cash and customers who paid with credit card.

PROJECT STATUS

*This data does not take into account the possibility that customers may have paid with a combination of credit card and cash. The nature of this test assumes that customers paid with only 1 payment type. Eliminating tips helps reduce the potential effect on our data, but not eliminate it entirely.

- EDA and Dashboard Complete
- Statistical Analysis Complete
- A/B Testing for Credit Card payments being higher than Cash payments Complete

NEXT STEPS

- Devise strategies to encourage customers to pay with a credit card. For example: signs in taxis, or verbal encouragement from drivers.
- Perform Regression Analysis
- Build and test Machine Learning Model

KEY INSIGHTS

- With a significance level of 1% we reject the null hypothesis that credit card payments are not different than cash payments.
- The significance level is remarkable. See below visualization. It is not an error in the plot, the p-values are so small, they don't register.