CSE 564 LAB 2A REPORT

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This report presents interesting observations about the data analyzed. The following are the noteworthy findings:

Firstly, one principal component contains almost 90% of the total amount of data, which is unusual since the data was not originally clean. The top four attributes were observed for this analysis, and it was found that the attribute with the most information is the number of ATMs per site. This indicates that India is still highly dependent on cash as a form of payment and legal tender. The next three attributes that contain the most information are the number of previous transactions happening online, the number of US elections happening offline, and the number of credit cards. This suggests that after the first attribute, all the other attributes are dominated by cash forms of payment. This may indicate that although India is not completely dependent on plastic money, it has made progress towards cashless forms of payment. The country as a whole has come a long way from what it was a decade or two ago, where it was entirely dependent on cash, and credit and debit cards were not considered safe or acceptable at all merchants across the country. With more and more merchants accepting cards through institutions like Visa, American Express, and Mastercard, it indicates how the country as a whole is now accepting of cashless forms of payments.

Secondly, using the elbow method, it was found that the number of clusters best suited for this data is two, which is a small number but might indicate how the data is spread out.

Finally, for implementing this project, Python Flask, JavaScript, HTML, and CSS were used.

The analysis shows that India has made significant progress in moving towards cashless forms of payment, which is a positive sign for the country's economic development. However, the data also suggests that cash still dominates most payment transactions. This could be due to a lack of infrastructure and accessibility to digital payment methods in certain parts of the country.

The findings also indicate that there is a need to increase awareness and promote the adoption of cashless forms of payment among merchants and consumers to accelerate the shift towards a digital economy. This would require collaboration between financial institutions, government bodies, and businesses to create a robust and secuure payment ecosystem that supports digital transactions.

Overall, the analysis highlights the progress made by India in adopting cashless forms of payment and the need for continued efforts to create a cashless economy.

In conclusion, the analysis suggests that India has made significant progress in moving towards cashless forms of payment. However, cash still dominates most of the payment transactions, as indicated by the top attributes analyzed.