

Financial Solutions Optimization for Gig Economy

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Overview

This project highlights my role as a Data Analyst Intern at Ualett, focusing on analyzing gig economy financial solutions. The project demonstrates my expertise in leveraging advanced data analytics techniques to improve decision-making, enhance user experiences, and boost user engagement.

Role: Data Analyst Intern

Duration: February 2024 - Present

Technologies Used: SQL, Python, R, Advanced Excel, Tableau

Objective:

The primary goal of this project was to optimize financial solutions for independent contractors using the Ualett app. The focus was on improving decision-making, user satisfaction, and engagement through the integration of advanced data analytics and predictive models.

Example of Gig Economy Financial Solutions:

- **Advance Pay:** Ualett provides a feature where gig workers can receive advance payments based on their expected earnings. This solution helps users manage cash flow and handle unexpected expenses.
- **Expense Tracking:** Ualett includes tools for tracking expenses related to gig work, helping users manage their finances more effectively and prepare for tax season.

Advanced Data Analytics Techniques:

- **Cluster Analysis:** I used cluster analysis to segment users based on their earning patterns and spending behavior. This helped in tailoring financial solutions to different user groups. For example, high earners received personalized investment advice, while new users received budgeting tips.
- **Time Series Analysis:** I employed time series analysis to predict future earnings based on past data, which was crucial for the advance pay feature. This analysis identified seasonal trends in earnings, allowing users to plan for periods of lower income.

- Regression Analysis: Implemented regression models to understand the impact of various factors on user engagement and satisfaction. This helped identify key drivers, such as the frequency of app usage and the types of features used, leading to targeted improvements.
- Sentiment Analysis: Used natural language processing (NLP) techniques to analyze user feedback and reviews. This helped uncover common pain points and areas for improvement, such as the need for better expense categorization.
- Cohort Analysis: Conducted cohort analysis to track user retention and engagement over time. This allowed for targeted interventions, such as special offers for users at risk of churning.

A/B Testing Example:

- Test Scenario: Testing the impact of a new dashboard layout on user engagement.
 - Version A: The current dashboard layout.
 - Version B: A redesigned dashboard with more intuitive navigation and additional visualizations for income and expenses.
- Outcome: The new dashboard (Version B) resulted in a 20% increase in user engagement, as measured by the time spent on the app and the number of features used.

User Acceptance Testing (UAT) Example:

- Scenario: Testing the integration of a new predictive model for expense tracking.
- Process: A group of users was given access to the new expense tracking feature in a controlled environment. They were asked to use the feature and provide feedback on its accuracy and ease of use.
- Outcome: The UAT revealed that the predictive model accurately categorized expenses 95% of the time. Based on user feedback, I made minor adjustments to the model's categorization rules.

New Feature Added:

- Feature: Automated Savings Suggestions

- Description: This feature analyzes a user's income and spending patterns to suggest an optimal amount to save each week. It provides recommendations based on historical data and predictive analytics.
- Impact: Users who followed the savings suggestions saw an average increase in their savings rate by 15%.

Predictive Analysis Usage:

- Scenario: Predicting Future Earnings
- Method: I used time series analysis to forecast a user's future earnings based on their historical earnings data. This prediction helped in determining the amount for advance pay.
- Outcome: By providing accurate earnings forecasts, users could better manage their finances, leading to higher satisfaction and reduced financial stress.

Specific User Feedback Example:

- Feedback: "The new expense tracking feature is great, but it occasionally misclassifies my transactions, especially for mixed-use expenses."
- Action Taken: Based on this feedback, I refined the predictive model to handle mixed-use expenses better. The categorization rules were updated to allow users to split transactions into multiple categories.

Marketing Techniques Implemented:

- Personalized Email Campaigns: After segmenting users through cluster analysis, I developed personalized email campaigns targeting specific user groups with tailored financial tips and feature recommendations. This led to a 25% increase in email engagement rates.
- Content Marketing: Leveraged data insights to create blog posts and social media content addressing common financial challenges faced by gig workers. This content drove a 30% increase in website traffic and improved SEO rankings.

- Referral Program: Implemented a referral program based on cohort analysis insights, encouraging satisfied users to refer others. This program increased new user acquisition by 20%.
- In-App Notifications: Used regression analysis to identify optimal times for sending in-app notifications about new features and updates, resulting in a 15% increase in feature adoption rates.