**Coding Club Project**

The data was collected on the use of mobile money services and the experiences of mobile money customers in three districts of Rwanda. The dataset has been provided and you have been asked to write a short summary outlining key findings from the project. You should perform all the statistical analysis required and write up the key findings. You should remember that the target audiences do not have a statistical background.

The research manager wants you to address the following points in the key findings:

1. Clean the data before undertaking any analysis
2. Impute the missing values in the data set
3. Select the variables, “age”, “gender”, “education level” and “number of household members” and write them in a new and separate file. Save the data set as “demographics.csv”
4. Conduct exploratory analysis of the data and write a few bullet points on any descriptive statistics you find interesting and why you find them interesting.
5. During the survey, participants listed all the different types of financial accounts that they have registered. The resulting data has a format where there is one observation per account type. Format the data so that there is now one observation participant.
6. Describe how the mobile money market is divided between the three companies. Include at least one chart or table to illustrate your findings.
7. Is there a difference in the share of customers who have experienced failed mobile money transactions in rural and urban villages? If so, is it statistically significant? Explain your findings including any assumptions and limitations.
8. What variables are good predictors that someone will cancel their mobile money account? Discuss what causes a customer to stop using their mobile money account including how strong the evidence is.
9. What variables are good predictors that someone understands the terms and conditions when registering for the mobile money account?
10. Pick variables in the data and conduct the following Inferential statistics: (a) One way ANOVA, (b) Chi-Square test, (c) One sample t-test, (d) Paired and independent two samples t-test, (e)
11. Pick variables in the data and conduct an analysis using the Generalized Linear models: (a) Regression analysis, (b) Binary/Multinomial logistic regression, (c) Poisson regression and (d) Ordinal regression
12. It is important to understand the assumptions behind the statistical tests you have used in this project.

**Variable Description**

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| **Variable** | **Description** |
| hhid | Household ID |
| account\_num | Account Number |
| account\_type | Type of account |
| district | District of household |
| urban | Household location in urban or rural village |
| gender | Gender |
| age | Age |
| hh\_members | Number of household members |
| highest\_grade\_completed | Highest grade completed |
| mm\_account\_cancelled | Has cancelled a mobile money account (MMA) in the past |
| prefer\_cash | Preference for cash over cashless payment methods |
| mm\_trust | Do you trust mobile money? |
| mm\_account\_telco | Please select the providers which you have a mobile money account |
| mm\_account\_telco\_main | Which would you consider your main mobile money account? |
| v234 | I understood the terms and conditions when I registered for a MMA |
| agent\_trust | Do you trust mobile money agents? |
| v236 | Have you ever taken a mobile money loan? |
| v237 | Have you ever had issues with the network being unavailable for mobile money transactions? |
| v238 | Before making a transaction, are you clear about the fees? |
| v240 | Has a transaction ever failed to go through? |
| v241 | Has an agent you’ve dealt with ever not had enough cash or efloat available? |
| v242 | Do you have a copy of the mobile money terms and conditions? |
| v243 | Do you understand how and where to complain if you have an issue with mobile money? |
| v244 | Have you had an issue successfully resolved after making a complaint? |
| v245 | Do you understand what data mobile money providers collect about you? |
| v246 | Have you been a victim of fraud? |