**EY Strategic Campaign Competition**

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**Challenge**

Given historical campaign data from crowdfunding platform Kickstarter.com, what strategic recommendations can be made to help a client launch their own successful Kickstarter campaign?

**Response**

I choose to create an interactive dashboard focused on (1) actionable insights, (2) unique analysis tools, and (3) exploratory graphics. These areas of focus were chosen to maximize ease of use for the client and to encourage novel exploration of the data.

To meet these demands I choose to create a dashboard using the Shiny Package from R Studio. Additionally, the open-source statistical programming language R was used to process the data and design the required features.

My choice to use a programming language to conduct this analysis over a more "user-friendly" point-and-click graphical interface tool like Tableau, Excel, or SAS Enterprise Guide was motivated by two key advantages.

1. R provides an unrivaled suite of powerful tools for cleaning, analyzing, and validating large data sets. An experienced R user can wrangle, analyze, and produce results exponentially faster and with more accuracy compared to other common BI tools like Excel and SAS EG.
2. R provides the ability to create custom functions to build unique analysis tools to answer complex questions. To build the same tools in Excel or SAS EG is often impractical and entirely impossible in Tableau.

**Notable Errors in the Provided Dataset.**

It is common for raw data to require extensive reformatting and error checking. The ksprojects.csv was no exception. There were a number of issues I was able to identify. Many were non-obvious but nonetheless essential to correct in order to provide a confident analysis for a potential client.

My findings and corrections are listed as follows.

1. **4 campaigns lacked a name.** 
   1. This was addressed by assigning "NONAME" to these campaigns
2. **~3500 campaigns had the incorrect classification for their final fundraising outcome.**
   1. This was remedied by comparing categories "usd pledged real" and "usd goal real" and relabeling with the correct campaign outcome.
      1. For example, if "usd pledged real" was found to be greater or equal to "usd goal real", the campaign was given the correct label of successful.
3. **~3200 campaigns were missing the value specifying the number of backers.** 
   1. I choose to omit these entries because it is hard to draw conclusions without this key metric and the number of cases was nominal compared to the ~370k+ total entries in the entire data set.
4. **7 campaign deadline dates were misclassified as ending in the year 1970.** 
   1. Clearly this is impossible considering Kickstarter was founded in 2009. I suspect the API defaulted to the initial year of the POSIX standard (Note: POSIX is simply a type of "date" data structure that is commonly used, likely an API import issue). I modified the deadline to be 30 days after the campaign start date. This was based on the average campaign length for all projects which was found to be 30 days.
5. **The column "usd pledged", designed to be a foreign currency converter provided by Kickstarter, was found to be inaccurate and unreliable.** 
   1. I compared accurate 3rd party FX rates and found an unreasonably high variance in the Kickstarter rates. However, the foreign exchange rates provided by Fixer.io in column "usd\_pledged\_real" were found to give the accurate conversion rate.

Other miscellaneous validation tests I performed included searching for duplicate entries and case-sensitive category misclassification. Nothing of note was found in these tests. All values were found to be unique.

**Final Remarks**

The main purpose of this analysis was to create a value driven product that could easily be used in a real-life client scenario. I hope this is the primary takeaway from this project.

If you have any questions or further inquiry, I can be contacted at **nl007@uark.edu**

Thank You,

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