# ProsperLoan Data Exploration

## Dataset

This [data set](#) contains 113,937 loans with 81 variables on each loan, including loan amount, borrower rate (or interest rate), current loan status, borrower income, and many others. This [data dictionary](#) explains the variables in the data set. The project objective is not expected to explore all of the variables in the dataset! But focus on only exploration on about 10-15 of them.

## Summary of Findings

- Loans with "AA" category are with lesser count
- Majority of the borrowers have credit grade of B,C & D most of which are following in C
- Highest number of loans taken was from Q2-2013 to Q1-2014
- LoanStatus of most Borrowers are with current, completed, default and charged off state
- EmploymentStatus of most of the Borrowers are with Employed State
- IncomeRange of most Borrowers are within 25,000-49,999 & 50,000-74,999
- Top 2 states of all Borrowers are from CA and NY
- Majority of the borrowers are with an occupation of Professional and Other
- The borrowers rate follow an approximately unimodal distribution, with the peak around 0.16. There seems to be a spike that occurs around 0.32.
- StatedMonthlyIncome: Monthly Income will definitely be right skewed since very few people will be having a higher salary. So further down in my analysis I have taken Income < 10000 as very few borrowers fall above that.

## Key Insights for Presentation

For the presentation, I focused mainly with the features that are impactful for approval of loanstatus I start by looking at the distrbuiton of each and every numeric and categorical variables and did all the necessary univariate, bivariate and mulitvariate analysis on the selected varaibles.

The major insights obtained are :

- For Applicants with prosper ratings from AA to D have the higher loan amount with increased salary
- Majority of the borrowers are falling under prosper rating of C
- The monthly income of borrowers are having higher values for employed, other and full time employment status with the prosper rating of AA, A and B
- We observe that borrower without owning a home has lesser loan amount and lesser Prosper rating than the one owning a home
- To conclude this analysis , I say that the loan approval status is heavily dependent on the applicant's information on IncomeRange, Homeownerstatus and employment status.