

## **Risk Analysis for Lending club**

### **Problem statement:**

Lending club is a great platform that helps borrower finding personal loans, financing, and business loans. The club also help investors to connect with the borrowers thus providing the opportunity for a great return. Since 2007, Lending club has helped 2.5 million people achieving financial assistance.

One of the biggest problems the company is facing is that many borrows do not pay the loans in time. This costs a lot of financial loss for the investors. Understanding the risk of the financial loss helps the investors to determine whether or not to lend loans to a new borrower. I propose to utilize machine learning to solve this problem.

**Client:** The lending club and its investors who lend money to the borrowers.

**Data.** I propose to use the data provided by the Lending Club. The data contains all loans issued through its platform since 2007. It contains several features including each loan amount, term, interest rate, current status of the loans, and borrower's details such as employment status and annual income.

**Approach:** I propose to begin with exploratory data analysis (EDA). The study focusses in understandings what types of borrowers are more likely to pay the loans on time or are likely to be charged off? What is the impact of higher interest rates? What does higher income mean for lending money? Next, I will use supervised machine learning to classify the borrowers based on several data features.