



Lending Club Case Study

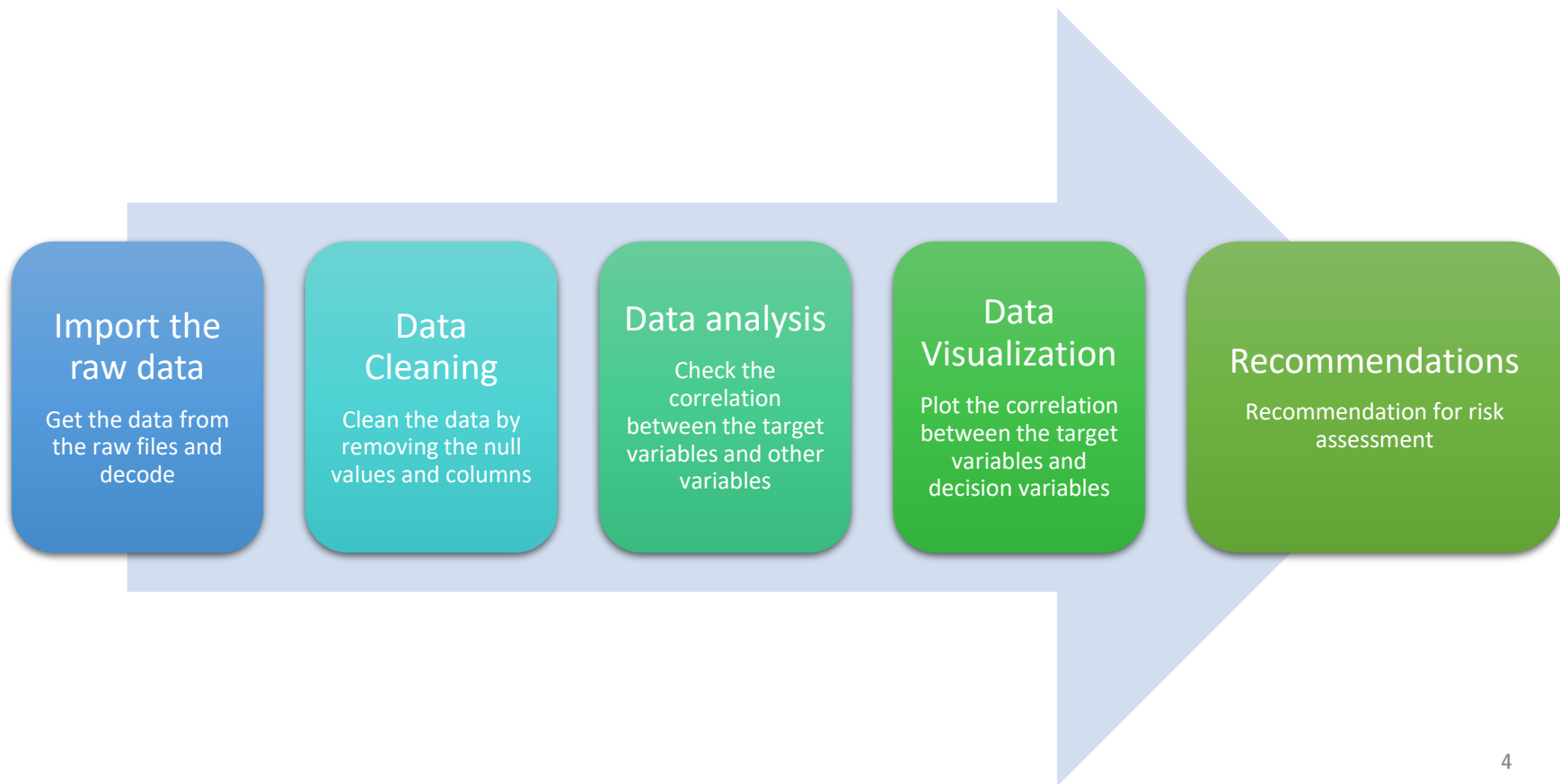
Group Members

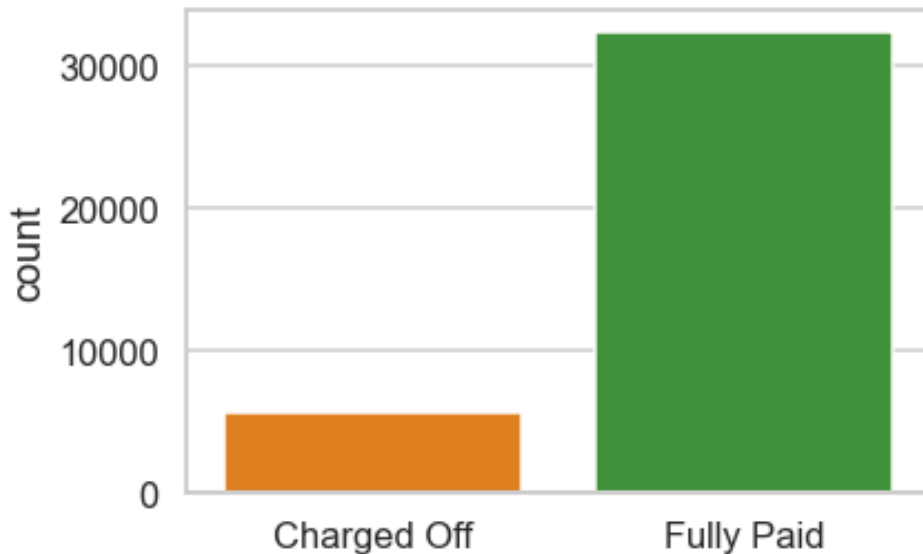
Dipin Narayanan

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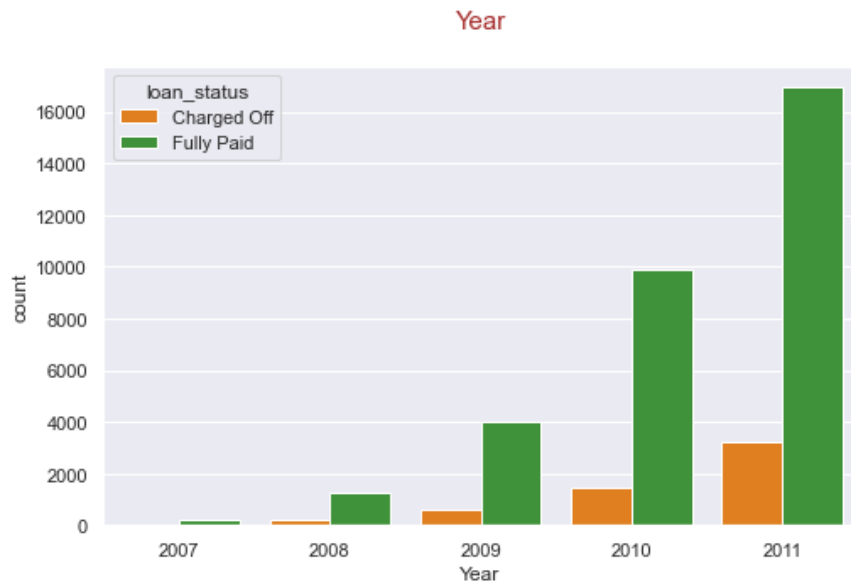
- LendingClub is America's largest lending marketplace, connecting borrowers with investors since 2007.
- It offers personal loans up to \$40,000 instantly.
- It also offers automobile loans, consumer loans and loans for medical procedures among other products

- When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile. Our aim is to identify patterns that indicate if a person is likely to default using loan data issued through the time period 2007 – 2011.
- The company can utilize this knowledge for risk assessment.



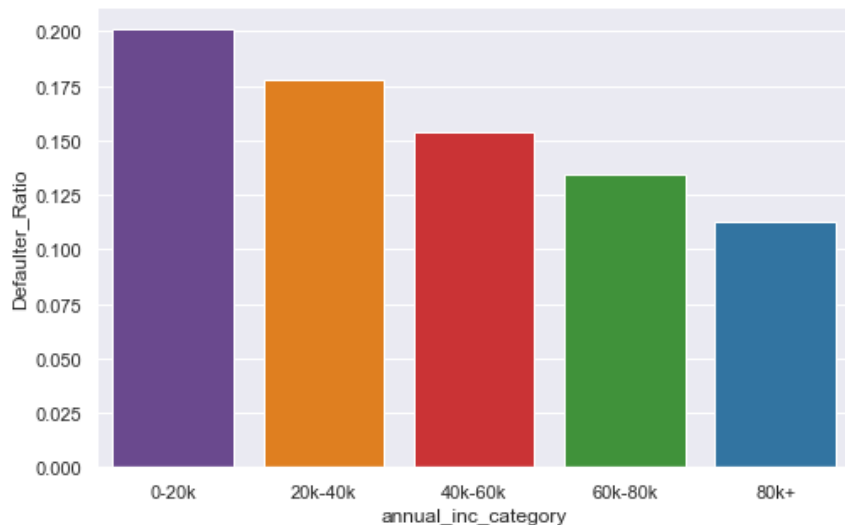


85.4% of applicants paid their full loan while 14.6% were defaulters

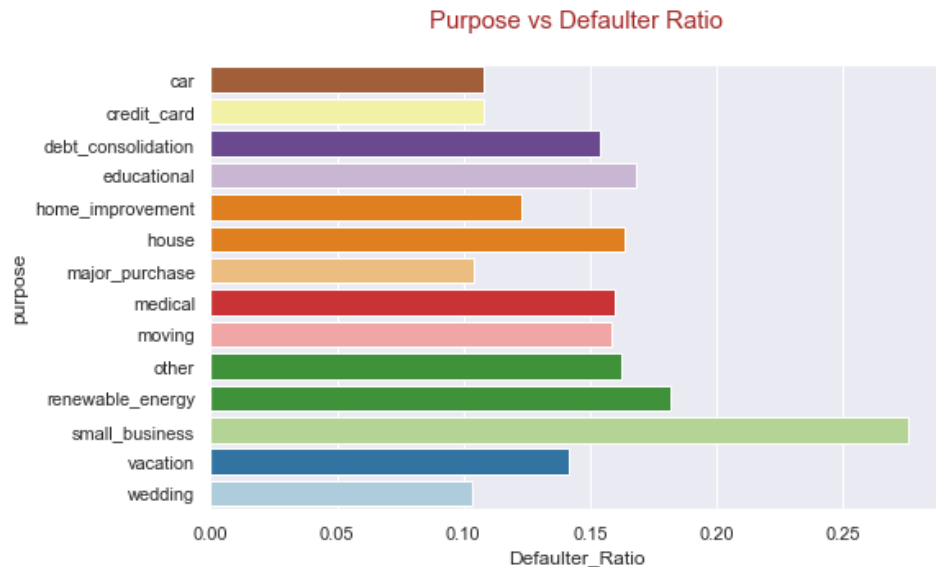


- The amount of loans applied has increased over the years
- In the year 2007, 240 loans have been applied while in 2011 it crossed 20,000
- Increase in loans also means increase in defaulters

Annual Income vs Defaulter Ratio

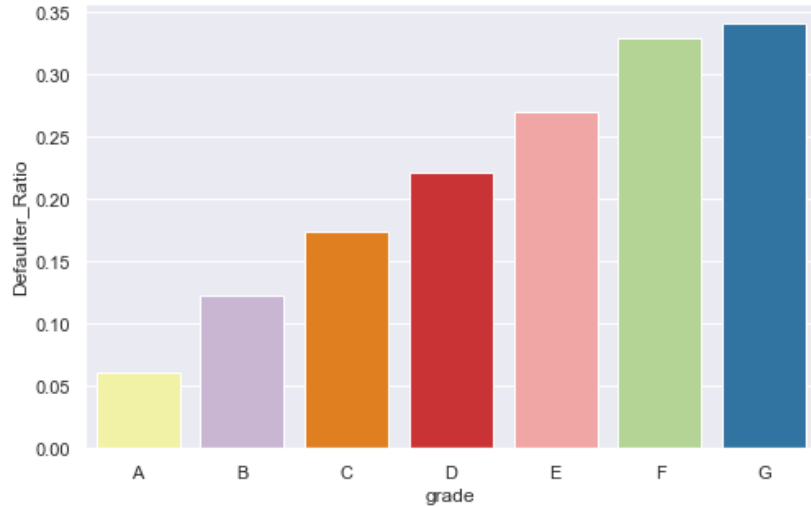


- Income range 80000+ has low number of defaulters.
- People with income range between 0-20k have a high chances of becoming defaulters.
- As annual income rises, the defaulter rate reduces.

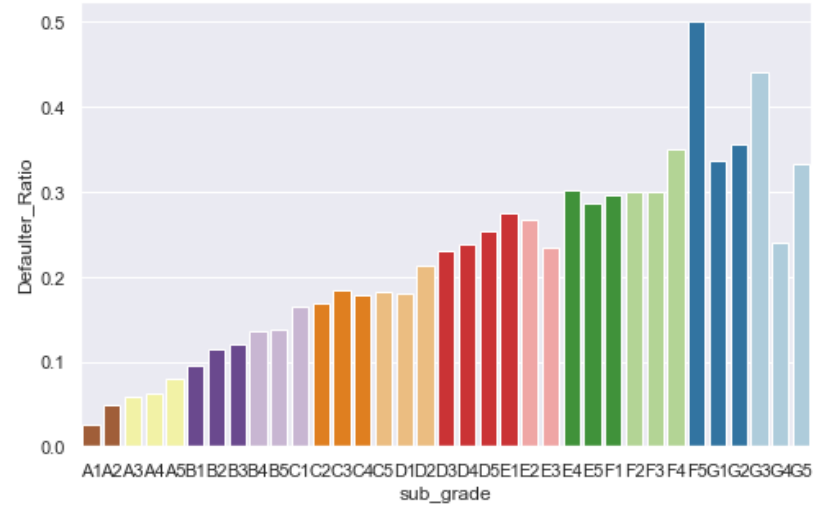


Loans for Small Business have high chances of defaulting.

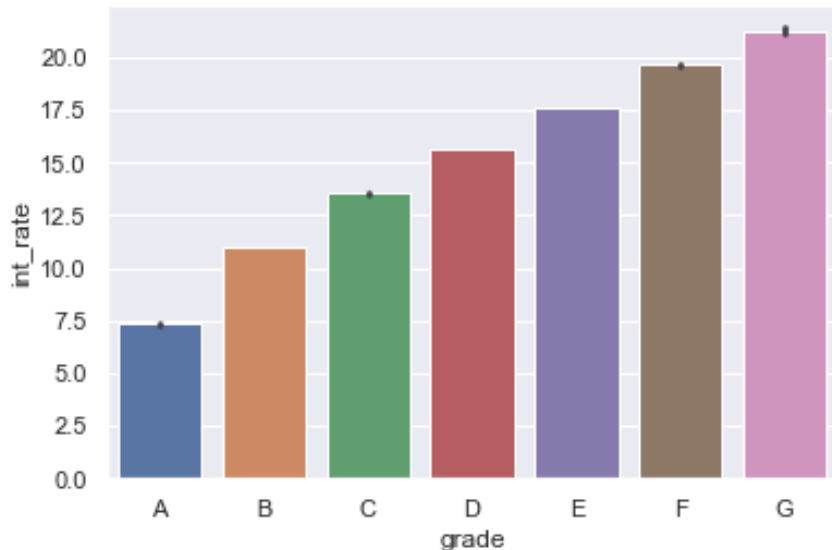
Grade vs Defaulter Ratio



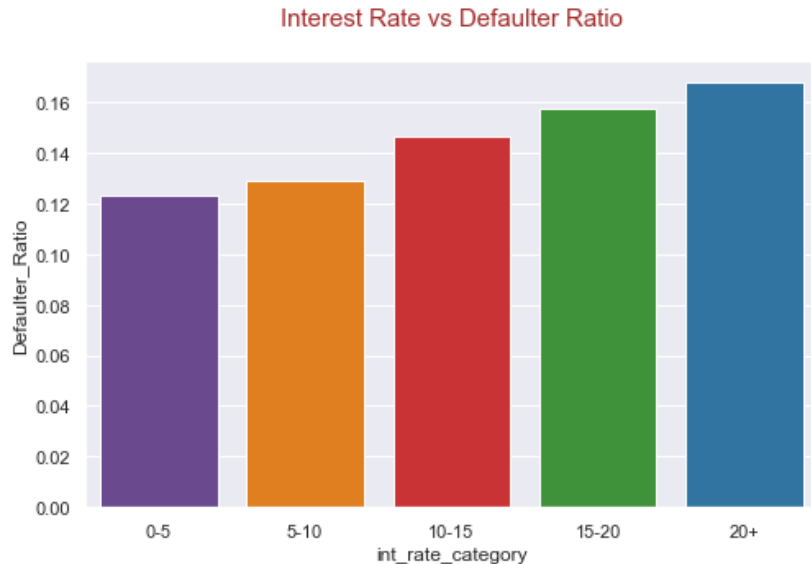
Sub Grade vs Defaulter Ratio



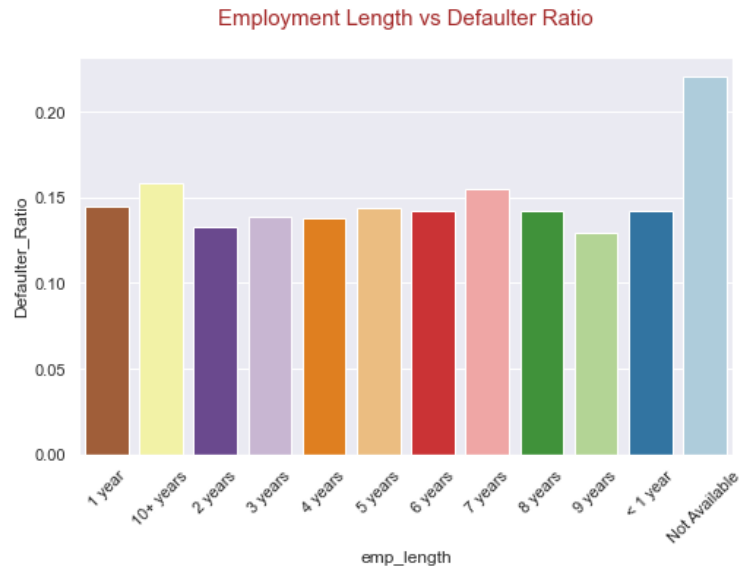
- Grade "F" and "G" have very high chances of defaulting with sub grade "F5" having the highest default ratio
- Grade "A" has the lowest defaulter ratio
- Chances of defaulting increases from grade "A" to "G"



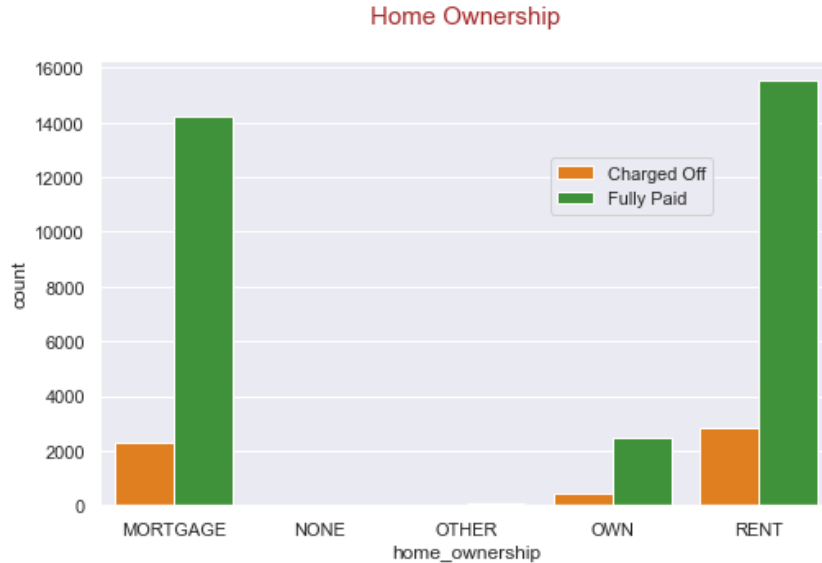
- As Grades increases, the interest rates also increases.
- This explains why there's a high amount of defaulters in grades, "F" and "G"



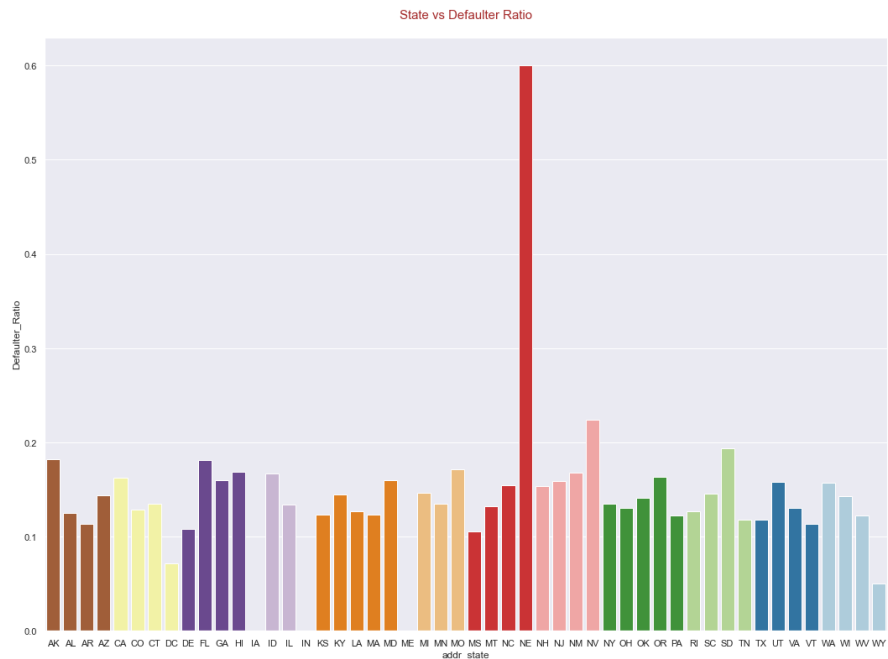
- Higher interest rates attract high possibility of defaulting
- Interest rates of 15% and above have high default rates
- Interest Rates of 10% or below have the lowest default rate



- People with less than 1 year of employment and 10+ years of employment both have high chances for defaulting
- There's not much difference in defaulter rate between other employment lengths



- People who own houses have the lowest default rate
- Borrowers in Rental homes and those with mortgages have higher chances of not paying their loans



- Borrowers from the state of 'NE' have the highest default rate
- States, 'NV', 'SD', 'AK' and 'FL' also have high default rates compared to other states

- People with higher income range have low default rates while people with lower income range between 0-20k have a high chances of becoming defaulters.
- Loans for the purpose of Small Business have high chances of defaulting.
- Grade "F" and "G" have very high chances of defaulting with sub grade "F5" having the highest default ratio.
- People with less than 1 year of employment and 10+ years of employment both have high chances for defaulting.
- People who own houses have the lowest default rate. Borrowers in Rental homes and those with mortgages have higher chances of not paying their loans.
- Borrowers from the state of 'NE' have the highest default rate. States, 'NV', 'SD', 'AK' and 'FL' also have high default rates.