1. In 250-500 words, write a thorough discussion of when to use ML and when not to. Do NOT go over the 500-word limit. It is essential to express this concisely. This should be informed by the Machine Learning for Business DataCamp course.
2. Perform pre-processing on the Lending Club dataset from class. Clearly use markdown to indicate each pre-processing step you are using. Note: you should use at least three different techniques. We have not gone over all preprocessing steps in detail, so it is unlikely you will be able to do more than three at this time.
3. Create a correlation matrix with a heatmap for the features in the Lending Club dataset. Use markdown to write about your takeaways in under 250 words.
4. Create a histogram showing the frequency of loan\_amounts. Describe what you see. Pay special attention to bin sizes, and clearly describe how you chose your bin sizes.
5. Create a new column called region that uses a lambda and shows which part of the US someone lives in, split up into Pacific, Plains, Midwest, Northeast, and South. Consider having your lambda call a function.
   1. Is there a better way to do this than with a lambda?
   2. Either use two different lambdas or a lambda and a different technique and see which one is more performant. Explain your findings in the markdown.
6. Create subplot histograms to show if loan\_amounts differ by region. Summarize your findings.