JLF Capstone 3 Project Proposal

- Problem Identification: What is the problem you want to solve?
    - Identifying fraudulent credit card transactions, and comparing different prediction algorithms for doing so.
- Problem statement formation
    - Does a neural network predict fraudulent transactions better than a linear regression model?
- Context: what will your client do or decide based on your analysis?
    - Decline or alert for review on potentially fraudulent transactions, with as few false positives as possible.
- Criteria for success: What are your deliverables?
    - A GitHub repo containing the work you complete for each step of the project
    - A slide deck
    - A project report
    - An answer to the question!
- Scope of solution space: Briefly outline how you'll solve this problem. Your approach may change later.
    - I will create a logistic regression model and a neural network model to predict fraud, and compare them for speed and statistical performance.
- Constraints
    - Prefer to limit false positives
    - Unbalanced true class: hopefully, attempted fraud is a small proportion of all transactions!
- Stakeholders: Who is your client and why do they care about this problem?
    - Credit card processors and merchants accepting cards both need to limit bad transactions as much as possible.
- Data sources: What data are you using? How will you acquire the data?
    - Kaggle dataset:
        - https://www.kaggle.com/mlg-ulb/creditcardfraud
    - Data has already been PCA transformed to anonymize
    - True class is 0.172% of transactions