Capstone 2 Proposal

- **Problem Statement:**

 1.5 years of customers behavior data from Santander bank to predict what new products customers will purchase. The data starts at 2015-01-28 and has monthly records of products a customer has, such as "credit card", "savings account", etc.

Need to predict what additional products a customer will get in the last month, 2016-06-28, in addition to what they already have at 2016-05-28.

These products are the columns named: ind_(xyz)_ult1, which are the columns #25 - #48 in the training data. We need to predict what a customer will buy in addition to what they already had at 2016-05-28.

- Who is your client and why do they care about this problem? In other words, what will your client do or decide based on your analysis that they wouldn't have done otherwise?

According to Kaggle ,To support needs for a range of financial decisions, Santander Bank offers a lending hand to their customers through personalized product recommendations.

Under their current system, a small number of Santander's customers receive many recommendations while many others rarely see any resulting in an uneven customer experience. In their competition, Santander is challenging to predict which products their existing customers will use in the next month based on their past behavior and that of similar customers.

- **What data are you using? How will you acquire the data?**

The data is available on Kaggle.The link is as below:

https://www.kaggle.com/c/santander-product-recommendation/data

- **Briefly outline how you'll solve this problem. Your approach may change later, but this is a good first step to get you thinking about a method and solution.**

  I will try to solve this problem using recommendation engines such as Content based recommendation and also would like to explore collaberative filtering as well.

- **What are your deliverables? Typically, this includes code, a paper, or a slide deck.**

  Deliverables would include ,detailed Exploratory data analysis,Inferential statistics and Building Recommendation model.

  All of the above will be part of github repository ,along with slides and blog post.