BUAN 4310 Project Problem 1  
International Collaboration

Albers School of Business and Economics

Warning: LOOOOOOOOOOONG document 😊

**Table of Contents**

[Overview 2](#_Toc82591248)

[Objectives 2](#_Toc82591249)

[Problem: Loki and the Multiverse of Innovations 2](#_Toc82591250)

[Directions 3](#_Toc82591251)

[Deliverable (individual submission) 3](#_Toc82591252)

[Project Problem 1 Rubric 4](#_Toc82591253)

# Overview

This project involves an international collaboration between SU and St. Joseph’s College (SJC) in India. It is part of the University’s initiative towards global connections/collaborations.

We will form in our groups of 2-3[[1]](#footnote-1) students from SU. Each SU group is similar to a consultancy and will be engaged to solve various problems that require our expertise in data mining throughout the course.

For this specific project, each SU group will then be paired with X students from SJC to analyse the distribution of patents filed and issued.

## Objectives

1. Experience an online international collaboration
2. Practise the use of GitHub
3. Reflect on the experience

**VERY IMPORTANT**: As with all projects and assignments, please ensure that the work and analyses are solely the group’s and not taken from another source. Using someone else’s or another party’s work and analyses amounts to plagiarism and will be handled according to SU’s policies. While we can use various sources as guides or references, please kindly understand that for purposes of the course, it is important to demonstrate our ability to solve the problems using data mining techniques. In other words, we have to showcase our abilities.

In addition, all deliverables should be professionally prepared. This is included implicitly in the requirements (especially since we are business students). While deliverables are not graded for grammatical and typographical errors (this is not an English or Literature course), the language should be professional, coherent, and comprehensible.

# Problem: Loki and the Multiverse of Innovations

**Due: Oct 24, 2021**

What If…………… innovations from Stark Industries were not documented? 😊

Loki, having travelled through space and time, and hopped through multiple universes, arrived in on Midgard (or some version of Midgard where we reside). Loki was surprised not to find any documented Stark inventions and wants to learn about patents on this Midgard, such as which regions have the most/least, when, who owns them, types of patents, etc, to determine the presence (and hence risk) of conquering.

Each group is given a dataset of patents (uploaded on Canvas group page) and corresponding documentation (on Canvas) for the EDA to give Loki an initial picture of patents on Earth-616. Like problems in practice, ambiguity and open-endedness are common. Please feel free to explore the data and uncover any stories you may find[[2]](#footnote-2). For visualisations, other applications such as Tableau and Excel are ok too. But please share those in the repository and/or include them in an rmd document or R script with explanations/interpretations in comments.

# Directions

For purposes of the project, the following is a broad outline to approach the problem.

* Get to know your group members[[3]](#footnote-3).
* Create a GitHub repository for the project and add each member to it.
* Perform initial EDA using R[[4]](#footnote-4)
  + The EDA is open-ended and can take a direction that suits your interest
  + Members can also pursue their own interests by adding to the EDA
* Upload to the GitHub repository
* Collaborate on the EDA using R

# Deliverable (individual submission)

**This is a collaborative project, but submissions are done individually** because it involves individual reflection. The following apply to SU students only.

We are to submit a professionally prepared reflection document (about 1-2 pages) that comprises the following:

* Short introduction of each member of the group (please make this fun if preferred)
* Short description of each group member’s contribution
* A link to the public Github repository (or shared with me)
  + The repository should contain an R script or rmd report of your initial EDA of the given dataset[[5]](#footnote-5)
  + Evidence of collaboration (branches, pull requests, group members’ added)
* Individual reflection on the collaboration
  + How was the collaboration done?
  + What collaboration tools were used in addition to GitHub (for eg, email, skype, etc)?
  + What worked well/did not work well?
  + How can you address this in future online collaborations?
* What did you learn about patents from the preliminary EDA and why do you think you found what you found?
  + This is open-ended. Much depends on your EDA
  + Even if the international collaboration did not out as expected, there should have been some EDA from the SU members and/or yourself.

Even though the data are fairly clean, some degree of data cleansing may be required. Students may spend some time getting the data ready for analysis. This is also part of the EDA. Some level of domain knowledge may be required to know how to explore and analyse the data. As consultants to your client, it is necessary to understand the business domain so as to tailor the analysis.

**IMPORTANT**: For just this specific project, it is OK if the international collaboration does not work out. The objective is to experience an online international collaboration. Hence, the deliverable is graded for adequate submission (i.e. has all the required components) and reflection.

**ALSO IMPORTANT:** Incidentally, if the international collaboration set up does not work out as expected, given the challenges we’re facing in both countries, please work on Problem 1 within your SU group, but write and submit the reflection of group work at the end of the quarter on your collaboration within your SU group. This is to facilitate the Assessment of Learning required by the School.

# Project Problem 1 Rubric

The grading rubric is given below[[6]](#footnote-6).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Reflection | OUTSTANDING | ACCEPTABLE | FAIR | POOR | TROLL |
|  | 4 points  Excellent essay of reflection, focusing on their collaboration with their team and the challenges they may have had around it, as well as how they were overcome, and what they learnt from the EDA. Also, focused strongly on the leadership aspect they played on the team and discussed any solutions to challenges that were presented. The essay had no problems in terms of organisation,  style or clarity. | 3 points  Satisfactory essay of reflection, focusing on their collaboration with their team, and what they learnt from the EDA. Also, focused on the leadership aspect they played on the team. The essay suffered from some problems in terms organisation,  style or clarity. | 2 points  Weak essay of reflection, focusing on either their collaboration with their team or focused on the leadership aspect they played on the team, and/or what they learnt from the EDA. The essay suffered from many problems in terms of organisation,  style or clarity. | 1 point  Clearly unacceptable essay of reflection with very little discussion around collaboration or leadership role that the student may have played, and/or what they learnt from the EDA. The essay suffered from numerous problems in terms of organisation,  style or clarity. | 0 points  Irrelevant |
| Output | 4 points  Live functioning GitHub repository of the project. Includes an R script that works and is at least partially completed. Shows evidence of collaboration (eg, branches, initial EDA) | 3 points  Some inadequate elements; between OUTSTANDING and FAIR | 2 points  Missing at least 1 element, such as the R script and/or evidence of collaboration (eg branches, initial EDA). | 1 point  Inaccessible repository or no evidence of effort to complete the deliverable even on an individual level. | 0 points  Irrelevant |

1. No more than 3. However, if you wish to work in a pair, please have a good justification. For purposes of the project, which is a lot of work, solo undertakings are strongly discouraged. Furthermore, a big part of this field is to learn to work in teams. Often, we don’t even get to choose who we work with. [↑](#footnote-ref-1)
2. For purposes of this project, it is OK not to find anything interesting. Please see the objectives. [↑](#footnote-ref-2)
3. While we can choose who we work with at SU, we can’t choose our counterparts at SJC. In practice, we don’t always get to choose who we work with. [↑](#footnote-ref-3)
4. For purposes of this specific project, it is not necessary to complete the EDA. But we have to start it. [↑](#footnote-ref-4)
5. For purposes of this project, the EDA DOES NOT need to be completed. [↑](#footnote-ref-5)
6. Please note that in all written assignments, there will be an element of subjectivity. All grade disputes (if any) should be followed up within a week of releasing the corresponding grade for the graded deliverable. [↑](#footnote-ref-6)