**IFI 8420**

**Final Project Guidelines**

**Group Assignment**

The following is an outline of FI 8090 final project.

Your project quality will be assessed based on your ability to identify complex business decisions and address the problem using unique data and coming up with innovative solutions to address the problem. The richness of the data will be important to address the problem more accurately. The data could be coming from multiple sources. The use of canned/ready data available in data sources such as Kaggle will not be qualified as a good resource.

1. Objective: (10 points)
   1. What are the main objectives of your analysis?
   2. What are you trying to investigate?
   3. What are the relevant questions?
   4. How do you plan to address your questions?
2. Data: (20 points)
   1. What is the source of your data? (Cannot use class data sets )
   2. What are the key variables?
   3. Perform data cleaning as appropriate.
   4. Provide summary statistics of key variables.
   5. Provide graphical representation of your data, where it is appropriate.
3. Data Analytics Methods: (30 points)
   1. Describe your hypotheses.
   2. How do you plan to test your hypotheses?
   3. Use appropriate models to test your hypotheses. You have to use at least 3 data analytics methodology to test your hypotheses.
   4. Note that, your main questions may involve computing some performance attributes such as financial ratios, in that case use these ratios to address some relevant questions. Just computing ratios cannot be the end of your analysis.
4. Results: (30 points)
   1. Provide and describe results.
   2. Describe strengths and weaknesses of each of the models that you used to test your hypotheses.
   3. Analyze model coefficients, model accuracy, prediction accuracy, power, training vs. test error, and any other relevant test statistics to support your argument.
5. Conclusion: (10 points)

Provide a brief conclusion of your findings.

1. References:

Provide a bibliography of any relevant references that you use for your project. You don’t have to cite all the help links for your R codes; however, if a portion of your R code comes from any particular online resource, you have to provide that information in the reference list. Note that your code cannot be entirely copied from any other resources and you are responsible to write the code yourself.

**Deliverables: Submit in iCollege before deadline**

1. Submit Python code for your project. The code should provide comments corresponding to each sections/questions of the project. Submit Python scripts electronically. Submit the code so that results are displayed in the program. Include all relevant data files that are needed to run the code. (70 points)
2. Prepare a power-point presentation (you can choose other presentation software). (30 points)
   * Your presentation should contain sections related to the outline listed above and should not contain any program scripts.
   * Focus on clarity, brevity, and overall presentation quality.
   * The presentation should be for about 12 minutes.
   * Each team member should present a part of the presentation.
   * Submit your presentation electronically before the deadline.
   * All members in the team should be ready for Q&A for any part of the project.
   * Maintain professionalism all the time in working with your team members during the project development process and while presenting your work in front of the class.
   * Your grade on the presentation will be based on: clarity and organization of the presentation as well as professional quality of it.
3. Provide team members evaluations.