IST 5520, Fall 2021, Chen

**Project Evaluation Form – Milestone 3: Data Analysis II**

**Submission Due Dec 5, 11:59 PM**

**Instruction:**

1. Submit your final project report that should include:

* Introduction (refined from M2)
* Data Source and Collection (refined from M2)
* Data manipulation (refined from M2)
* Data summarization and visualization (refined from M2)
* Regression analysis (newly developed)
* Predictive modeling (newly developed)
* Summarize Findings (newly developed)

Read the evaluation criteria carefully on the next page for the detail.

1. Use Markdown in Jupyter notebook to write your project report. You need to use proper Markdown syntax to format your report. Do not use MS Word or other format for the project report.
2. Please submit the following documents into Canvas:

* The final project report written in .ipynb file;
* The reflection report (2 pages) in MS Word;
* The Evaluation form in with full project team information (see below table).

**Project Team Information (filled in by students)**

|  |  |  |
| --- | --- | --- |
| **Member name** | **Percent contribution** | **Activities completed by the member** |
| Xinyue Chen | 16.67% | KNN price prediction, presentation, conclusion and summaries |
| Nathan Dierkes | 16.67% | PCA, KNN rating analysis, some M2 corrections, presentation, conclusion and summaries |
| Joe Distler | 16.67% | Superhost support vector machine, presentation, conclusion and summaries |
| Viraj Vilas Rane | 16.67% | Random forest property prediction, presentation, conclusion and summaries |
| Abby Ross | 16.67% | Recommendation model, presentation, conclusion and summaries |
| Yinkai Xiong | 16.67% | Decision tree customer satisfaction, presentation, conclusion and summaries |

**Evaluation Summary – M3 (filled in by instructor)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Target %** | **Comments** | **Evaluation** |
| * Refine your project report by addressing all issues on M2 commented by the instructor. | 10 |  |  |
| * Correctly use regression analysis methods to address some research questions and/or to get some solid conclusions that improve our current understanding of your dataset. | 20 |  |  |
| * Properly use predictive analytics to solve some classification and prediction problems on your dataset. * The predictive analytics should include model building, tuning, and testing to get a “best” predictive model for your dataset. * At least use 6 regression or classification models, properly visualize these models and compare their performance. | 25 |  |  |
| * Summarize the key findings and provide suggestion for business improvement. * Explain implications or benefits your project can bring to the stakeholders. | 20 |  |  |
| * The 2-page reflection report (Word document) summarizes important/interesting experiences and thoughts on your project. | 10 |  |  |
| * Format your project report in a professional way. * Professionally organize your contents to show your data analysis efficiently and concisely. * Write your project report by using appropriate Markdown syntax. | 10 |  |  |
| * Use your github repository to manage all your project documents. * Your github repository should contain the latest documents for your project deliverables. | 5 |  |  |
| The report satisfies all of the following criteria:   * It tells a very interesting story; * The regression and predictive analytics methods are professionally applied; * The whole document is well written with no or few grammar or writing issues. | 10 bonus |  |  |
| **Total** | **100** |  |  |