**FinTech Unit 11 Classification Homework Grading Rubric**

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| **Criteria** | **Ratings** | | | |
| **Resampling**  • Data Oversampled with Naive Random Oversampler and SMOTE algorithms. • Data Undersampled with Cluster Centroids algorithm. • Data Over and Undersampled with combination of SMOTEENN algorithm.  **Classification Analysis**  • Best Balance accuracy score determined. • Best Recall score determined. • Best Geometric mean score determined. | **35 Points Mastery** • Completed 6 out of 6 requirements • Code runs without error and produces the assigned results • Code accounts for all possible scenario  • Code is free of bugs | **34 > 28 Points Approaching Mastery** • Completed 4 out of 6 of requirements • Code runs without error • Code produces results as expected 80% of the time | **28 > 23 Points Progressing** • Completed fewer than 2 out of 6 requirements • Code runs without error  • Code produces results, but not necessarily the correct results | **23 > 0 Emerging** • Completed 1 or none out of the 6 requirements • No submission • Code runs with error |
| **Ensemble Learning**  • Model trained using Quarterly Data. • Balance Accuracy Score calculated from *sklearn.metrics*. • Confusion Matrix printed from *sklearn.metrics*. • Classification Report generated using *imbalanced\_classification\_report* from *imbalanced learn*. • Feature Importance printed and sorted in descending order for balanced random forest classifier along with Feature Score   **Classification Analysis**  • Best Balanced Accuracy Score model determined. • Best Recall Score Model determined.  • Best Geometric Mean Score determined. • Top Three Features determined. | **35 Points Mastery** • Completed 9 out of 9 requirements • Code runs without error and produces the assigned results • Code accounts for all possible scenario  • Code is free of bugs | **34 > 28 Points Approaching Mastery** • Completed 6 out of 9 of requirements • Code runs without error • Code produces results as expected 80% of the time | **28 > 23 Points Progressing** • Completed 4 out of 9 requirements • Code runs without error  • Code produces results, but not necessarily the correct results | **23 > 0 Emerging** • Completed 2 or none out of the 9 requirements • No submission • Code runs with error |
| **Coding Conventions/Formatting**  • Appropriate header, name, short description at top of the notebook • Imports are at the top of the file, just after any headers or subheads. • Files read in from relative file path • Functions and variable names are descriptive, lowercase, with words separated by underscores • Clean code, no repetition, maintainable and highly reusable code. • Appropriate code wrapping and cell sizes • Appropriate subheads as needed | **10 Points Mastery** | **9 Points Approaching Mastery** | **8 Points Progressing** | **8 > 0 Emerging** |
| **Deployment/Submission**  • Files submitted in personal repo • Appropriate directory structure with correct files needed to run scripts • Appropriate commit messages • Appropriate README | **10 Points Mastery** | **9 Points Approaching Mastery** | **8 Points Progressing** | **8 > 0 Emerging** |
| **Documentation/Comments**  • Code is well commented with concise, relevant comments | **10 Points Mastery** | **9 Points Approaching Mastery** | **8 Points Progressing** | **8 > 0 Emerging** |