**FinTech Unit 10 Time Series Homework Grading Rubric**

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| **Criteria** | **Ratings** | | | |
| **Time-Series Forecasting**  • **Hodrick-Prescott Filte**r utilized to decompose the **settle** price into trend and noise.  • **ARMA** Model used to forecast returns. • **ARIMA** Model used to forecast settle price. • **GARCH** Model used forecast volatility.  **Time Series analysis**  • Purchase of the yen analyzed for or against. • Risk of the yen analyzed. • Confidence of models as a basis for trading analyzed. | **35 Points Mastery** • Completed 7 out of 7 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 5 out of 7 of requirements • Code runs without error • Code produces results as expected 80% of the time | **28 > 23 Points Progressing** • Completed fewer than 3 out of 7 requirements • Code runs without error  • Code produces results, but not necessarily the correct results | **23 > 0 Emerging** • Completed 1 out of 7 requirements • No submission • Code runs with error |
| **Linear Regression Forecasting**  • Data prepared, returns and lagged returns created and data split into training and testing. • Linear Regression model fitted. • Predictions made using testing data. • Out-of-sample performance. • In-sample performance.  **Linear Regression Analysis**  • Model performance analyzed for out-of-sample and in-sample data. | **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 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 |
| **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** |