# FinTech Unit 13 AWS Homework Grading Rubric

## Both Options

| Criteria | Ratings | | | |
|---|---|---|---|---|
| **Coding Conventions/Formatting**<br><br>• Appropriate header, name, short description at top of the notebook<br>• Imports are at the top of the file, just after any headers or subheads.<br>• Files read in from relative file path<br>• Functions and variable names are descriptive, lowercase, with words separated by underscores<br>• Clean code, no repetition, maintainable and highly reusable code.<br>• Appropriate code wrapping and cell sizes<br>• Appropriate subheads as needed | **10 Points Mastery** | **9 Points Approaching Mastery** | **8 Points Progressing** | **8 > 0 Emerging** |
| **Deployment/Submission**<br><br>• Files submitted in personal repo<br>• Appropriate directory structure with correct files needed to run scripts<br>• Appropriate commit messages<br>• Appropriate README | **10 Points Mastery** | **9 Points Approaching Mastery** | **8 Points Progressing** | **8 > 0 Emerging** |
| **Documentation/Comments**<br><br>• Code is well commented with concise, relevant comments | **10 Points Mastery** | **9 Points Approaching Mastery** | **8 Points Progressing** | **8 > 0 Emerging** |

## Option 1

| Criteria | Ratings | | | |
|---|---|---|---|---|
| **Initial Robo Advisor Configuration**<br><br>• **RoboAdvisor** created with proper parameter.<br>• **RecommendPortfolio** created and configured with proper name utterances.<br>• **RiskLevel** custom slots created with proper card slots.<br>• **RoboAdvisor** tested after build with error handling configuration. | **35 Points Mastery**<br>• Completed 4 out of 4 requirements<br>• Code runs without error and produces the assigned results<br>• Code accounts for all possible scenarios<br>• Code is free of bugs | **34 > 28 Points Approaching Mastery**<br>• Completed 3 out of 4 of requirements<br>• Code runs without error<br>• Code produces results as expected 80% of the time | **28 > 23 Points Progressing**<br>• Completed fewer than 2 out of 4 requirements<br>• Code runs without error<br>• Code produces results, but not necessarily the correct results | **23 > 0 Emerging**<br>• Completed 1 or none out of the 4 requirements<br>• No submission<br>• Code runs with error |
| **Enhance RoboAdvisor with Amazon Lambda Function**<br><br>• **User Input Validated.**<br>• **Investment Portfolio Recommendation** given on **selected risks.**<br>• **Lambda Function** tested with **sample test cases.**<br>• **Lambda Function** integrated to the **RoboAdvisor.** | **35 Points Mastery**<br>• Completed 4 out of 4 requirements<br>• Code runs without error and produces the assigned results<br>• Code accounts for all possible scenarios<br>• Code is free of bugs | **34 > 28 Points Approaching Mastery**<br>• Completed 3 out of 4 of requirements<br>• Code runs without error<br>• Code produces results as expected 80% of the time | **28 > 23 Points Progressing**<br>• Completed 2 out of 4 requirements<br>• Code runs without error<br>• Code produces results, but not necessarily the correct results | **23 > 0 Emerging**<br>• Completed 1 or none out of the 4 requirements<br>• No submission<br>• Code runs with error |

## Option 2

| Criteria | Ratings | | | |
|---|---|---|---|---|
| **Data Preprocessed**<br><br>• Data loaded using Pandas DataFrame into **crypto_df.**<br>• Data Preprocessed with the assigned preprocessing tasks.<br><br>**Data Dimension Reduced**<br><br>• **PCA** algorithm from **sklearn** used to reduce dimensions.<br>• **pcs_df** DataFrame created and crypto_df.index used as the index for **pcs_df** DataFrame. | **35 Points Mastery**<br>• Completed 4 out of 4 requirements<br>• Code runs without error and produces the assigned results<br>• Code accounts for all possible scenarios<br>• Code is free of bugs | **34 > 28 Points Approaching Mastery**<br>• Completed 3 out of 4 of requirements<br>• Code runs without error<br>• Code produces results as expected 80% of the time | **28 > 23 Points Progressing**<br>• Completed 2 out of 4 requirements<br>• Code runs without error<br>• Code produces results, but not necessarily the correct results | **23 > 0 Emerging**<br>• Completed 1 or none out of the 4 requirements<br>• No submission<br>• Code runs with error |
| **Cryptocurrency Clustered**<br><br>• **K-Means** used to cluster the cryptocurrencies using **PCA** data.<br>• **Elbow Curve** used to find the best value for **k**, using the **pcs_df** DataFrame.<br>• Kmeans algorithm used to predict the **k** cluster for cryptocurrency data.<br>• New DataFrame created named **clustered_df**, includes assigned columns and index.<br><br>**Visualizing Results**<br><br>• 3D-Scatter plotted created using **Plotly** using **clustered_df** DataFrame, paramaters used as directed.<br>• Data table created using **hvplot.table** for all current tradable cryptocurrencies, columns used as directed.<br>• Scatter plot created using **hvplot.scatter,** to present clustered data with directed parameters. | **35 Points Mastery**<br>• Completed 7 out of 7 requirements<br>• Code runs without error and produces the assigned results<br>• Code accounts for all possible scenarios<br>• Code is free of bugs | **34 > 28 Points Approaching Mastery**<br>• Completed 5 out of 7 of requirements<br>• Code runs without error<br>• Code produces results as expected 80% of the time | **28 > 23 Points Progressing**<br>• Completed 3 out of 7 requirements<br>• Code runs without error<br>• Code produces results, but not necessarily the correct results | **23 > 0 Emerging**<br>• Completed less than 3 of the 7 requirements<br>• No submission<br>• Code runs with error |
| **Optional Challenge**<br><br>• Jupyter notebook uploaded to **Amazon SageMaker** and deployed. | **20 Points Mastery** | **15 Points Approaching Mastery** | **10 Points Progressing** | **5 Emerging** |