FinTech Unit 5 Homework: Grading Rubric				
Criteria	**Ratings**			
Budget Analysis • Generate a Plaid access token to access the Developer Sandbox. • 90 days account transactions fetch from the sandbox using Access Token. • Basic budget analysis on the sandbox transaction and plot generated. • Fetch Income data using the API: Print Last Year's income before Tax, Current Monthly Income and Projected Income Before Tax.	**20 Points Mastery** · Completed 4 out of 4 requirements · Code runs without error and produces the assigned results · Code accounts for all possible scenario · Code is free of bugs	**19 > 16 Points Approaching Mastery** · Completed 3 out of 4 of requirements · Code runs without error · Code produces results as expected 80% of the time	**16 > 14 Points Progressing** · Completed 2 out of 4 requirements · Code runs without error · Code produces results, but not necessarily the correct results	**14 > 0 Emerging** · Completed 1 or none out of the 4 requirements · No submission · Code runs with error
Retirement Planner • Monte Carlo Simulation created for the retirement portfolio. • Historical data Fetch from Alpaca API for a traditional 60/40 Portfolio using SPY and AGG with appropriate tickers. • 500 Runs Monte Carlo Simulation and 30-year simulation for 60/40 portfolio. • 90% confidence interval calculated • Histogram of the results and 90% confidence interval plotted as vertical lines on the histogram.	**20 Points Mastery** · Completed 5 out of 5 requirements · Code runs without error and produces the assigned results · Code accounts for all possible scenario · Code is free of bugs	**19 > 16 Points Approaching Mastery** · Completed 3 out of 5 of requirements · Code runs without error · Code produces results as expected 80% of the time	**16 > 14 Points Progressing** · Completed 2 out of 5 requirements · Code runs without error · Code produces results, but not necessarily the correct results	**14 > 0 Emerging** · Completed 1 or none out of the 5 requirements · No submission · Code runs with error
Retirement Analysis • Cumulative returns at 30 years for the 10th, 50th, and 90th percentiles • Expected return in dollars at the 10th, 50th, and 90th percentiles for a 20k Investment. • Plaid Analysis with a 4% withdrawal rate. • 50% increase analysis on initial investment on 4% retirement withdrawal.	**15 Points Mastery** · Completed 4 out of 4 requirements · Code runs without error and produces the assigned results · Code accounts for all possible scenario · Code is free of bugs	**14 > 11 Points Approaching Mastery** · Completed 3 out of 4 of requirements · Code runs without error · Code produces results as expected 80% of the time	**11 > 9 Points Progressing** · Completed 2 out of 4 requirements · Code runs without error · Code produces results, but not necessarily the correct results	**9 > 0 Emerging** · Completed 1 or none out of the 4 requirements · No submission · Code runs with error
Financial Report • Budget Analysis, transaction data summarize charts and tables produced. • Retirement portfolio analyzed, charts from monte carlo simulation included.	**15 Points Mastery** · Completed 2 out of 2 requirements · Code runs without error and produces the assigned results · Code accounts for all possible scenario · Code is free of bugs	**14 > 11 Points Approaching Mastery** · Completed 1 out of 2 of requirements · Code runs without error · Code produces results as expected 80% of the time	**11 > 9 Points Progressing** · Completed fewer than 1 out of 2 requirements · Code runs without error · Code produces results, but not necessarily the correct results	**9 > 0 Emerging** · Completed 0 out of 2 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**	**8 Points - Approaching Mastery**	**5 Points - Progressing**	**0 Points - 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**	**8 Points - Approaching Mastery**	**5 Points - Progressing**	**0 Points - Emerging**
Documentation/Comments • Code is well commented with concise, relevant comments	**10 Points Mastery**	**8 Points - Approaching Mastery**	**5 Points - Progressing**	**0 Points - Emerging**
Optional Challenge — Early Retirement • Portfolio adjusted for early retirement - Analysis of high stock vs bond ratio/ Initial Investment	**10 Points Mastery** · Completed 100% of requirements · Code runs without error and produces the assigned results · Code accounts for all possible scenario · Code is free of bugs	**8 Points - Approaching Mastery** · Completed ≥ 80% of requirements · Code runs without error · Code produces results as expected 80% of the time	**5 Points - Progressing** · Completed ≥ 70% of requirements · Code runs without error · Code produces results, but not necessarily the correct results	**0 Points - Emerging** · Completed ≤ 70% of requirements · No submission · Code does not run without error