

## How do I get an A on my Course Project?

The course project is effectively an aggregate homework that pulls together what we have covered in all of the homework assignments. You are to implement a trading strategy and convert it into a production version, but one that you have not done before. Place particular attention on 1) the rationale for the choices you made and 2) identify problems and issues you experienced and how you overcame them.

The key to an A rests with me being able to provide affirmative answers to the following questions:

1. Do the project deliverables (report and presentation) clearly and specifically state the trading strategy? In regular English, you should state the trading strategy so that someone else could completely replicate and implement your strategy from scratch, without any other information.
2. Does your implementation of the trading strategy, whether it is the backtest or the production version, teach the class something new about systematic trading and quantitative investing? As an instructor for the course, I have only covered the basics and only in my own way. My way is definitely not the best way, but I feel the materials, code, and approach are reasonable for instructional purposes. Certainly if you don't think so, please let me know. Anyhow, there are disadvantages and advantages to the way I have organized and coded the backtest and production versions and things that I have missed. Are you simply replicating my work with minor modification or are you improving or otherwise building on my work? To give you an idea of some of the virtually limitless possibilities here, here are a few examples:
  - a. All of the trading strategies implemented in class have been predicated on the basic OHLC data available from Nasdaq Data Link. Early on, I had you also work with other data sources. Can you implement a trading strategy that uses one or more of these other data sources? For example, how can you incorporate insider trading data into a trading strategy?
  - b. We have covered a day trading machine learning strategy, but surely there are strategies for holding longer positions. What would be the entry and exit rules?
  - c. So far, we have only implemented pure strategies: trend, momentum, arbitrage, and machine learning, but certainly we can be creative and do a mix, no?
  - d. Should we invest the same amount of money in every equity?
  - e. What other features would it be nice to have for a production version? How about tracking performance over time? Also it is helpful to know how your backtest performs versus your production version. Knowing that as time progresses with your production version, those historical days completed can be "backtested" and you can do a direct comparison.
  - f. What other backtest performance measures would be interesting to know? Here are two examples: on average, how many positions are open at any given time? For how long is a position open?

- g. What automated error checking can you put in place to help ensure your backtest is working properly? A number of checks can be performed on the open and closed dataframes to make sure cash flows, entries, and exits are performed correctly.
- 3. For the presentation, are the presenters engaging? Are the presenters easy to understand and do they communicate effectively? Are the PowerPoints clear and do they serve the purpose for which they are intended?
- 4. For the report, is it easy to understand? Is it organized effectively and well written? Is it complete and professional? Does it have appropriate and readable figures and charts and screen captures?

**Bottom line, have you taught me and the class something new that is useful and/or meaningful and did you communicate that new material effectively?**