Learning, by Teaching

tl;dr: Teaching Data Science is a humbling, impactful opportunity. I've helped a group of individuals leap forward in their career, and they've helped me leap forward in mine.

# Intro

Four months ago, I joined Metis, a group that teaches data science to individuals and companies.

After a career of building startups, building open source projects, and leading machine learning teams at a Fortune 100, I thought this role would be a cake walk. It wasn't.

I've spend the past three months co-teaching data science fundamentals and advanced topics to a hungry and passionate cohort of individuals who have left their previous lives to pursue their passion: building and deploying data projects.

Through this process, I've been very fortunate to have taught a broad variety of topics, from the python data stack to distributed computing, and from linear regression to deep learning and natural language processing.

I've also been very fortunate to have learned both directly and indirectly from the people I've lead through this process. For my own sanity and refernce, I've archived those learnings here.

# Mechanics of teaching

I've studied classical mechanics, quantum mechanics, and orbital mechanics (close to rocket science). None of it compares to the mechanics of teaching.

## Ideas, not inertia

I've been fortunate to have access to a time-honed cirriculum design and updated by practicioners of data science, and masters of pedagogy. I've also found myself asking 'Why?' quite a bit. As in 'Why do we teach this?', or 'Why use this analogy'. Each of these questions has lead to long nights, and has helped me refine and/or reject existing approaches to teaching our curriculum.

When in doubt, it's worth asking if the existing slides are the right way of presenting material, or those slides are just a convenient way of presenting material.

## Run teaching like a business

Through leading teams and projects at a Fortune 100 company, I've picked up a thing or two from the amazing project managers I've worked with.

Those skills have greatly helped me run an efficient, (mostly) happy classroom. From running efficient student syncs, to scoping and managing student projects, treating the individuals I work with as direct reports has helped keep them on track, and me responsible for their work.

In particular, weekly retrospectives have been incredibly helpful. Every other week, I mark the whiteboard with 'What went well?', 'What didn't go well?', and 'What will we focus on next week?'. I then hand each of the students an Expo marker, and we write on the board as a team. It's a cathartic experience, and it has helped to identify areas where I've wasted energy, and places where I can give a little more love.

## Everyone has different goals

One of the most impactful moments of this cohort has been realizing that every one has different goals and passions. Identifying those goals has helped me leverage my time and my collaborator's much more efficiently.

People tend to work a lot harder and longer when they're passionate about the direction they're going in.

# Soft skills

## A smile goes a long way

In past roles, I've been cold, highly efficient, and unliked. I've found that smiling, and greeting each person as they enter each morning has helped me appreciate those I work with, and build a happy environment. It also has actually helped me work and lead more efficiently.

After all, work is easier when you like and appreciate the people you work with.

## Every success counts

I stuggle to thank people for the work they do, and to congratulate them for the successes they achieve. Culturally, within tech we tend to hyper-focus on optimization, often at the expense of existing progress.

In all stages of life, and particularly when making a major investment your career, it's also easy to focus on your failures and loose track of your successes.

Seeding a culture of gratitude and self awareness has helped to combat this issue, but it's still not a silver bullet for the imposter syndrome.

# Takeaways

I've been very fortunate to work with an amazing cohort of individuals. I've lead them in the next step in their journeys, but I've also learned a lot for them. As they enter an amazing job market, I'm excited to continue mentoring them and hearing about their successes.

As this time has helped them take ten steps forward int their career, it's also helped me take ten steps forward in mine.