About three years ago, I participated in a Google TV hackathon. It was fairly short and I was new to Android development at the time, so I wanted to create a simple application which showcased the unique advantages of the TV form factor. At the time (Q3 2012), MOOCs were making a big splash, but the space was fragmented. I had taken several, and while I enjoyed those early MOOCs quite a bit, it was a challenge to keep track of my scores and what was due when across several platforms. Even *finding* MOOCs was becoming more and more difficult, as each major platform was beginning to welcome new partners and each partner in turn created several new courses.

So, I designed and implemented a tiny piece of an app which I called "Homeroom". Homeroom was intended to make your smart TV an indispensable part of your education. It would connect to your accounts on Udacity, Coursera and MITx (which later became edX), wrap the interfaces for those platforms, and provide a comfortable way to watch videos and complete quizzes on your television. It would also parse information about new assignments as they became available and remind you of what was due when. Even if you didn't choose to connect your accounts, it would collate course listings from those sources, allowing you to browse them in a standardized format, search for courses matching your interests and preferences, and review courses you had taken for the benefit of future students. Reviewing courses would also benefit you, as a simple collaborative filtering algorithm would be applied to suggest future courses you might like to take.

Now let's fast-forward to this spring when I joined the OMSCS program. I noticed that every registration period, without fail, scores of students would post to the Google+ group saying things like, "I know Java but not Python (yet), I don't like group projects, and I am working full-time and only have about 20 hours a week to devote to my courses. Which course should I take?" After a couple of iterations of this, I began to wonder how I might reincarnate the Homeroom idea and adapt it to the OMSCS program. Having a dedicated place to go to tackle the question of "What course should I be taking?" could help reduce duplicated effort and give new students more confidence entering the program. And because of the large number of students and relatively small number of classes, I thought the problem of data sparseness for the collaborative filtering approach could be ameliorated or eliminated altogether.

As I sketched out my designs and ideas for the webapp which I'm now calling omscs-advisor, I very quickly came to see this as an ideal platform for research about student success and preferences. By refining the type of information we solicited from students when they were reviewing a course, we could get self-reported data on their performance, not just how much they liked or disliked taking it. We could infer prerequisites based on whether a student's course performance differed, statistically, given the presence or absence of another particular course in their history. We could infer redundancies based on students' evaluation of how much they had learned from the course, and whether *that* was influenced by having another course in their history. Perhaps we could apply techniques from web development more generally to explore what factors affected student retention in the program. If we could get enough students to submit reviews, we could even use machine learning techniques to do things like predict the popularity of courses, or see whether a particular change (using or avoiding ProctorU, for instance) had affected student evaluations. We might even be able to tease out insights into what makes the best courses in the program so beloved, so that other courses could imitate their success.

And I'm informed that the name for all that fun stuff is educational technology, so here I am!