The following will be a short summary of my experience mentoring under Prof. Yeap through the UTA programming run by Dr. Neville and Dr. Jones.

When being a teaching assistant at an undergraduate level, one of the first mindsets to adopt is how, as much as it is a job helping others, it's also an opportunity for you to experiment with teaching. In a way, the class is your guinea pig. While this is not to say that helping others is not important, having this kind of mindset was pretty beneficial to the UTA experience. As for my takeaways from the program, they can be split into two parts.

The first is a mentality. After working closely with professors building lessons, packaging topics and structuring homework, you gain a real appreciation for the process your own professors go through to make a wide variety of people who all learn differently understand and get good at a topic. Its real challenging once you start to dig into it. There is no one presentation fits all that magically makes you learn, different things click for different people. That being said, with the mentality of trying to view things from the professor's perspective, you learn to see the intention behind questions. Questions that seem like rote practice now highlight some relevant idea, which is cool and all, but you really do gain an appreciation/sympathy for what educators do.

The second major takeaway from the UTA program is all of the practice you get doing whatever you do. While this may sound vague, what is done during the semester is largely dependant on the class and the mentor. Over the course of the semester, I talked to students a lot. As part of my UTA workload, I ran weekly problem sets and held exam review sessions. A large part of those two tasks involved talking, which seems easy enough but in that mathematical situation where you are effectively presenting topics and facilitating conversation, a whole different skillset is involved; very different from day to day conversation. I found that as the semester went on, I became more comfortable with speaking in that capacity. Depending on what you end up doing, different skill sets will be built throughout the semester.

I would recommend the UTA program for anyone with the time, the enthusiasm (for both people and maths) and the interest for it. It's a pretty cool thing to go through.