Tips to Make the Most Out of Your Project With Me

Inspired by <u>Javier Rando</u> and his great tips he shared <u>online</u>, I have decided to create my own list of advice I give to students who work on projects. Some of the tips are the same, some are slightly adapted, some are new! If you landed here, we are probably starting a project together, so please take some time to read through this document!

- Work on something that excites you. While I have a certain set of potential project ideas, I always ask students to bring in their own idea of topics they find interesting, which can be related or completely different. I will try my best to make those happen or make suggestions that could turn vague ideas into research projects. Of course, you are not expected to create good research projects yourself, but it is important that you work on something that excites you.
- You can do great research. Do not approach this project as "Alex has a research idea, and I am going to implement it, execute experiments and follow instructions". I want my students to do (or learn how to do) research. This is not easy, you will feel lost at times, but that is totally normal. It will feel like a rollercoaster, but we will get somewhere and learn a lot!
- You are the leader of this project. I will be guiding you through the process, but it is
 important that you feel comfortable and in charge of everything that is going to happen.
- Align expectations. We will try to get this research project as far as we can. We often
 publish projects in main conferences and/or workshops. It would be great if you share with
 me what your ultimate goal is (e.g. get a main conference paper for your PhD applications)
 so that we can try our best to make this happen. It is also completely fine to tell me you do
 not aim to publish -- sometimes a research project is just that: a project for credits.
- I value work-life balance, and you should too! I usually do not work on the weekends or
 late at night, and I block time to do sports or see friends. And you should, too! Above all, I
 value having healthy relationships with students, and you should feel happy about where
 your life or work is heading. The worst is if you feel pressured by me or the project.
- You are not expected to publish. Research is very uncertain and it's impossible to say "we
 can publish this" beforehand. It is even harder to anticipate when you have other obligations
 on the side (e.g., coursework or job applications). Sometimes things work out great,
 sometimes they don't, and that is part of the process. What is most important is our learning
 process and effort.
- The project will change 1000 times and that is okay. As we start working on a project, it is
 likely that we pivot several times or change the framing. Sometimes, we have even changed
 topics completely after several weeks. This does not mean the project is going wrong or that
 you are not doing a great job. This is extremely common and you should expect this to
 happen in great research projects.
- I make suggestions, you make decisions. You are the person working actively on this project and know all the details much better than I do. I will make suggestions, which sometimes might be completely off. Tell me when these are not good and feel free to stick to only those suggestions that make sense.
- **Do not take everything I say for certain.** In line with the above, I am also often just completely wrong -- please tell me, haha! You should not be afraid to say that out loud when it happens.
- I am here to help you, ask anything. I am happy to help with anything: career questions, sharing tips or experiences, introducing you to someone, etc. Just ask! I will try my best.
- Share your own ideas. You will come up with ideas. Sometimes they feel "crazy" or "stupid", but in my experience they often are great. Share them with me and try to think how to implement them. The process of turning ideas into experiments is extremely valuable!
- If you are blocked for long, ask. As you take agency for the project, you are also expected to be independent for smaller problems like cluster setup, bugs or errors; solving them is part

of your learning process. However, if you are stuck on something big or for long (e.g., a full day), it's my job to help. This could also be things like needing more compute or choosing a dataset or framework to use. We can then figure things out together, or I may know the solution and save you a lot of time. If I do not, I will tell you.

- Share your frustration. Sometimes experiments are not working out or you feel stuck somewhere, do not let this drag you down. Share with me what you think is going wrong, why things are not working and we will work to fix those.
- Ask on Slack anytime. If you have questions, send them on Slack as they come. Do not get blocked and wait until our meeting. I will get to those as soon as I can.
- **Send reminders.** I will sometimes forget stuff I promised I would give you. Feel free to send reminders on Slack frequently. You are not being annoying!
- Anything that can be handled on Slack, ideally should be handled on Slack.
 Simple/organisational questions are often better handled offline on Slack than in the meetings.
- I am generous with my time, but be mindful. I usually give students 30-45 min/week for
 meetings. Meetings should be productive. If you think there are no things to discuss (maybe
 you have been implementing code, or were sick that week) or those things can be handled
 on Slack, feel free to cancel the meeting (I will not take this negatively -- quite the opposite,
 foresight is great!). I won't micromanage you and you do not have to share every little update
 on Slack immediately.
- Come to meetings prepared. I think a productive meeting has the following structure. It is often a good idea to first present (1) the goal/agenda for our meeting, (2) what you need out of this meeting (e.g. today I want to run some results by you and then discuss which of these 3 experiments might be best to run next. Ideally, after this meeting I should know how to prioritize my next experiments and which infrastructure is best to run them). This will help us both steer the conversation and make sure we get everything done in time. Some students like to use slides, others use a GDoc, or others do not use anything. Feel free to organise the meetings however you feel more comfortable. If you want to present results, it is often good to select the interesting findings beforehand and compile them so that we do not need to navigate your code interpreter to find them.
- Pay attention to qualitative results. This is a general suggestion to do better research. Many insights come from observing qualitative results. We are often running experiments and only look at the numbers. Take some time to look through the results and try to find patterns. For example, if you are measuring how good your model generations are, spend some time looking at good and bad generations; try to understand what is going on beyond the metrics or how those fail. Also, a lot of our discussions during meetings will be about qualitative results!
- Organize your ideas. We should set up an overview document in the beginning of the project where we keep a summary of the research project and meeting notes. The main things that are worth writing out are (1) the goal of our project, (2) what would be nice to show and why, (3) how do we plan to achieve this. This document will be changing over time but it is often good to have a guide of how we are thinking about the problem. It is easy to lose perspective as we get deeper into running experiments.
- You do not need to prove your productivity or ability to me! In our meetings, do not list the tasks you have done or over complicate explanations. Similarly, you do not have to justify why you did not work much this or last week. Having agreed to supervise you for a project, it means I trust you and your abilities! Every person manages their time differently and every week will be different. In our meetings, instead of focusing on tasks, I like to focus on research ideas (e.g. discuss results with me, questions, new experiment design, etc.).
- If you think things can be improved, let me know! Each student is different and I try to
 adjust to their way of working. It is great if you can be transparent about things that you think
 can be improved in the process or that would make you feel more comfortable. This
 document is a compilation of many of those things, and it is much easier for me to adjust if
 you let me know asap.