Interviewing an Expert Researcher [Prof. Kay Robbins]:

1. **How do you start a research project?**

   It is necessary to have a concrete idea of the research project that you are going to start with. For making sure you get it, you can start with the following things –

   - **Google search:** Search the papers related to your project, try to find the papers with a lot of citations and look for papers in high quality venues i.e. high quality journals and publications.

   - **Take simple examples:** Try to find simple examples out the papers and relate to your project. For example – if it is a *Theory* then pick out some points/hypotheses from it relevant to your topic/problem, if it is a *Model* then start with the related simulation (just a rough model of your own), if it is a *Data* then you can analyze it using analysis tools (for e.g. MATLAB), or if it a *Software* then you can download and try to get started with it; and also you can implement something on your own in order to move ahead.

   You have a whole thing (a subject /problem) and you need to start chipping it off from a point, get deeper into it and slowly you will reach a point where you can see different directions to go, and its then you need to decide which way you are going to take. When you see these directions clearly, then you can realize that you have a concrete idea of your project.

2. **What specific tools do you use (e.g. library resources, computer software, forms of measurement, statistics)?**

   Most common tools are library resources, software, and generally data is used for measurement with application of appropriate statistics for better representation of data, and use analysis tools for analyzing and interpreting data; also other related tools if required.

3. **How did you gain your expertise with the various tools you use?**

   Practice is the most important thing for gaining the expertise. Also teaching is a plus point, so teaching as well as working on various tools regularly enhanced my expertise on these tools.

4. **What are some important experiences you suggest for a novice researcher?**

   According to my experience, the first thing that I suggest a novice researcher is to have collaborations with other people in your field and try to discuss your problems with them. You need to talk about your research topics/ideas with people, which will really help you to understand what they think of it and would give you suggestions or enhance your knowledge in one way or the other. Secondly, do the writing, it is important for a researcher to have good writing skills. Along your research, you can start to write a paper with a presumption that you have got an ideal solution to your problem, and it is most likely that you could end up with a good paper written by yourself.

5. **If I wanted to learn how to become a competent researcher, what specific tools would you suggest I work with?**

   The tools are almost similar as mentioned in the second question, and in addition to those tools I would suggest you to write **Grant Proposals** taking different set of problems and proposing the best and feasible solutions to these problems. With these grant proposals, you may actually get a grant and could get a chance to work on it.

6. **Do you have a defined time period (daily/weekly) dedicated to your current research projects? Do you think it is important to do so?**

   Generally, I like to write about my research projects and work on them during the morning time at my work place in my home, keeping all the things aside so that there is no distraction of any kind (for e.g. not checking my emails, no any recent news, not going through any latest advancements or not reading any new papers for a while) and I can solely focus on the research project in hand. Yes, I think it is important to have dedicated time for your research projects to make sure the work is going on.

7. **If you need a researcher in your team, what would be (three) major qualities you look for or expect them to have?**

   The qualities, that I expect, a new team member (researcher) should have are –

   - Done well in their courses: helps to have a better understanding of their capabilities.
   - Be hardworking: a research requires hard work and dedication.
   - Do not give up spirit: not to be afraid of failing and stick to your idea; try, try until you succeed.

8. **Provide at least two suggestions/piece of advice for a novice researcher, which would help them in their research project (Personal/Professional).**

   - Do a lot of reading. But only reading won't take you anywhere unless you do or implement something by yourself. Therefore, along with reading try to write or work on some problems that may be of your interest.
   - Always make sure that you are working on your research project or something related to it; as it is much easier to get distracted after you fail once or twice.

Submitted by:

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