

# Guide to Topic Selection for Bachelor's and Master's Theses

## 1. Before you start to look for a thesis supervisor:

**Where do you stand in your studies?** Ideally, you should be done with your studies at the end of the thesis. Thus, when you contact us, you should be able to tell when (what term) you will finish your last courses.

## 2. What to consider when identifying potential supervisors?

### **What courses have you done & which did you enjoy especially?**

It is always an advantage if you already took a course with your desired supervisor. This means that you have an idea of who we are and that you already know the necessary basics of the research fields that you might write a thesis in and, most important, that you have an idea of whether you would find a topic in the area engaging. Note that Prof. Regina Hebig is new and some of you might simply not have had the chance to take a course with her. Thus, for now, this should not be a hurdle.

### **What is the overlap between your research interests and the research interests of your desired supervisor?**

For supervisors from the Software Engineering research group look at the supervisors' profiles under [se.informatik.uni-rostock.de](http://se.informatik.uni-rostock.de) ->Teaching->Student works. We all list our research interests as well as examples of theses we used to supervise in the past. Ask yourself: Which of the topics are interesting for you? Which of the past theses sound like something you would love to do in your own thesis?

## 3. Do you want to work with a company?

Sometimes there is already a company that you are in touch with. Sometimes you need to reach out to companies. Often companies might be interested in working with a master/bachelor student, as it gives them the opportunity to explore certain questions without a huge investment. Some companies might even be interested in getting to know potential future employees by collaborating on a bachelor's or master's thesis.

Note that companies often have their own constraints when it comes to the topic. Thus, it makes sense to reach out to companies first and see what they want, before settling on a topic/supervisor.

## 4. What type of research method suits you best?

### **Are you more interested a) in developing a prototype and evaluating it or b) in executing empirical research, without the need to build an own prototype?**

In fact, you might be able to do both in one thesis. However, many students have a strong preference in the one or the other direction. Being aware of your preference helps us find the right topic together with you.

**What is your preference regarding the following three points about data collection?:**

**a. You are rather willing to spend effort to get in touch with practitioners**

This is necessary for different types of thesis topics involving, e.g., interviews with practitioners, experiments with practitioners and/or students, or questionnaires.

Also, a lot of programming-centered thesis topics require evaluation through users. In this case the number of people that need to be recruited might be lower, making the task a bit easier.

If you are not going to work with one specific company, it makes sense to reflect about and utilize your network of current and former co-students, during a thesis like that.

**b. You are rather willing to spend effort searching for suitable cases or case-systems (e.g., using Open-Source source platforms like Github)**

Not all research prototypes need to be evaluated with users. Sometimes it is more suitable to show that a prototype works on specific representative systems/data. In that case there is the need to identify such representative systems/data.

**c. You are rather willing to spend effort mining open-source data and aggregating insights**

This is a third alternative to approach research questions that can lead to good insights, too. Here you will often have to learn to work with different APIs of the different platforms and manage running the scripts.

**5. How to contact one of us to ask whether we can become your supervisor?**

A great way to get in touch is always asking us in person, e.g., at the end of one of our lectures that you attended. Otherwise, you can get in touch via E-Mail. In the case including the points below is even more important:

**a. Status of your studies:** (see question 1 above)

- Courses left to do and when you will finish them

- The desired timeline for your thesis: when do you want to start and finish the thesis?

**b. Reason you choose the supervisor:** (see question 2 above)

- Courses you have done with the supervisor that you enjoyed

- Research topics you are interested in/ past theses from other students supervised by the supervisor that you found exciting

**c. Company involvement:** (see question 3 above)

- Are you talking to a company/considering to work with a company for the thesis work?

- If yes, what are their ideas about the topic?

**d. Method preference:** (see question 4 above)

- What are your preferences regarding the research method and data collection?