

Bachelor / Master Project Guide

This document provides the detailed steps if you plan to do your *Bachelor* or *Master* project at the Chair for Data Analysis and Visualization. On *our BA/MA projects website*, you can typically find all topics that we currently offer. Mostly, the first seminar session of each semester is a great opportunity to get in contact with the resp. project supervisors. Contact the responsible supervisor if you have identified a topic you are **interested** in. Alternatively, you can proactively **propose an individual topic** you would like to work on by contacting a supervisor who works on topics close to your topic. To find a suitable topic for a project, you must meet all deadlines mentioned below. We expect you to work independently on your project. The registration and submission deadlines of *BA Projects* and *MA Projects* are stated on the *Department of Computer and Information Science* website.

Note that the listed guidelines *only serve as an orientation and may not be binding*. Organizational requirements *depend on the specific project and supervisor*. Your supervisor *may provide examples of the documents you have to submit* regarding your project (previous project proposals, milestone plan, final report, etc.) for your reference. Ask your supervisor to *create a DBVIS GitLab account for your project* or if you have further questions.

1. Find advisor, frame topic & set clear goals

- **Get familiar** with the topic of your project. Then, you need to **frame and work out the project details** independently. Please **discuss the research direction** with your advisor.
- Set clear goals (in agreement with your supervisor) that you want to achieve until the end of the project that show your contribution (novelty, visualizations, analysis goals, etc.).

2. Write Project Proposal and set up Detailed Milestone Plan

- The project proposal should contain a specific **Research Question** (RQ), clear **project goals**, and **first ideas** (and sketches) on how you aim to address the stated RQ.
- The proposal usually consists of 2-4 pages → use overleaf and send the project link to your advisor so
 he/she can track your progress.
- Make **regular backups** using GitLab/GitHub, if necessary (or OverLeaf History). You are responsible if you lose your data due to missing backups etc.!
- Set up a **detailed milestone plan** (incl. project phases' start/end dates) **before** project registration.
- If you want, you can use the provided LaTeX/Overleaf Template to create the Milestone plan!
- · Your advisor must confirm your proposal/plan before you can start working on your project.
- **Submit final project proposal** and the **milestone plan** to GitLab (or e-mail, depending on the advisor).

3. **Project Registration**

- Define a specific (tentative) **project title** (get it confirmed by your supervisor)
- Typically, your project reviewer is Prof. Dr. D. A. Keim or Dr. J. Fuchs.
- Please use the respective BA or MA project registration template to register your project.

4. GitLab Repository (gitlab.dbvis.de)

- If your project includes **programming tasks** (usually, it does), your advisor will **provide a GitLab repository** for your project to track your coding progress and may provide comments and hints if issues arise.
- If applicable (varies between different BA/MA projects), your project may start by using a given framework that already includes necessary plugins, packages, datasets, data loading functionality, etc.
- Please use **GitLab issues** to track your progress. Especially for sharing your progress through visual means such as **screenshots** or **GIFs** and adding them to issues as documentation facilitates to discuss implementations, e.g., visualizations.

5. Regular Project Supervisor Meetings

- During regular (e.g., bi-weekly) meetings you will discuss issues, status progress, and next steps.
- Before every meeting, make sure to create a detailed agenda by using, e.g., a GitLab issue or a Power-Point presentation. This will also help you later to write the final report about all you have achieved during your project. Supervisors can cancel/abort meetings if you are not properly prepared. Your supervisor will let you know how meeting details are handled.
- You are **responsible** for the **content of the discussion** in the meetings, and you need to **be prepared to ask questions** if you need help (*if not already clear through GitLab issues*).
- In general, you first need to **try to solve your problems on your own** (spend some time. Usually you can find anything online!), **BEFORE** asking your supervisor.

6. Student Project Presentation

- You must present your work to the group and other students after 50-80% of the project period.
- The advisor will organize this presentation once your project status is ready to present → feedback on the project presentation should be included before the students write the final report.
- If you want (you do!) to receive audience feedback about your presentation, please use the *DBVIS*Feedback System to create a custom questionnaire template to receive specific feedback about your project. Please share your feedback questionnaire URL at the beginning of your presentation.
- Typically 20-25 min presentation + 5-10 min discussion (max. 30 min total).

7. Write Final Report

- The final report include the **progress** during the project and **all results** (e.g., use ACM Template).
- The background section of the final project report is a great starting point for the Related Work section of the final thesis → ensure that your chosen RW is suitable for your topic!
- A **code documentation/manual** about your code is very helpful and appreciated (you can use docs generator instead of writing it manually).
- At the project end you MUST **submit your code and used dataset(s)** (e.g., preferably via **GitLab**, a **single zip file**, or **cloud.uni.kn**), and the final report **as PDF via E-Mail** to your supervisor.
- Typically, the final report strongly focuses on the **technical details of your developed prototype**. You should also **present specific Uses Cases** (examples), to demonstrate the **contribution** of your prototype. But this highly depends on the project topic and what you did. It may not be applicable to unusual topics.
- Identify **potential future work** and give an **outlook** on your thesis topic.

8. Relevant Project Deadlines

Project Start: Submit Project Registration Form (signed by examiner and student): requires project title, milestone plan, and project proposal

2-4 weeks before project end: **Project Presentation** (20min + 10min). Audience: Examiner, Supervisor, and other students.

Project End: Submit Final Project Report (incl. Documentation & Implemented Code via GitLab or .zip file)

9. Write BA/MA Thesis

We recommend discussing topics and perspectives **early** with your supervisor to continue your thesis in our group. They will also provide **guidance and suggestions** for a suitable second reviewer you require for defending your thesis.