

## Master Thesis: LLM-based Adaptive Smartphone Keyboards

Smartphones are supporting us in our everyday lives, e.g. by providing tailored information on demand anywhere and anytime. With the rise of LLMs, developments around adaptive and intelligent behaviors have sped up. However, smartphone keyboard interfaces have not significantly changed in the last years. Albeit the word prediction algorithms noticeably improve, the interaction and UX concepts have remained.

In this thesis, you will work on novel interaction concepts for smartphone keyboard word suggestions. The aim is to think out of the box and come up with yet unseen ideas, to provide users a benefit from recent LLMs and other prediction algorithms.

This thesis follows up on a previous student project, on whose results and work you can build. That encompasses among others the results of a user-centered ideation and design process with interviews and two focus groups, and a prototype implemented in Android based on Google's AOSP keyboard.

A thesis consists of...

- A comprehensive literature research in your domain of research. Your concept and design decisions have to be based on related work where possible. You have to work out a research gap that your project fits into, to avoid reinventing the wheel.
- Coming up with an approach on how you plan to tackle your research question, including steps and timeplan
- Preparing, conducting and evaluating a user study
- Writing up your project in a thesis document
- Present your project in the disputation seminar two times, "Antrittsvortrag" and final presentation

You are a good fit for this topic if you...

- Have advanced programming skills and experience in Android
- Love to dive deep into Android projects, data, and machine learning algorithms
- Have a creative and proactive mindset to come up with ideas and approaches to tackle problems
- Are in your third (or higher) semester of your Master studies in media informatics, computer science, or a related field
- You are the project leader of your thesis. This requires an active working style and self-management, including making decisions to stay on track towards meeting your thesis' goal.

If you are interested, please drop me a message including some information why you feel you are a good fit for this topic and a transcript of records to [thomas.weber@ifi.lmu.de](mailto:thomas.weber@ifi.lmu.de) and [florian.bemmann@ifi.lmu.de](mailto:florian.bemmann@ifi.lmu.de) !