



BA/SA/Group/Lab:

Outdoor Sports Route Generation

There are many outdoor sports apps on the market. Many of them allow you to track your routes and evaluate your workouts. Some apps enable sharing of routes between users and few tools exist for automatic route generation. However, the latter are mostly quite simple and yield unsatisfying results.¹ The typical exercise procedure therefore starts with manual planning or selecting a route. As this is an undesired overhead, people tend to use the same routes over and over again, although this is rather boring.

We think that route generation for outdoor sports like workouts, hiking or even just sightseeing can be done in much better ways using a smartphone. In past theses, we created an Android app² which generates routes for running. By extending the app to other sports and by leveraging more data available online, we should be able to improve the experience. Specifically, we want the app to generate routes on the fly, similar to satellite navigation devices which can adapt the route if the user deviates from the foreseen path. Furthermore, the app should also adapt to user preferences and different environment conditions.



Requirements

- Creative thinking and good programming skills are advantageous to successfully work on this topic.
- The student(s) should be able to work independently!

Interested? Please contact me for more details!

Contact

- Manuel Eichelberger: manuel.eichelberger@tik.ee.ethz.ch, ETZ G97

¹ <http://www.plotaroute.com/>
<http://www.routeloops.com/>

² SmartRoute App in the Google Play Store: <https://play.google.com/store/apps/details?id=js.myroute&hl=de>