

Semester thesis/Lab “Analysis of sleeping patterns using (multiple) smart phone sensors”

In today's fast-paced world, getting enough rest out of your sleep is especially important. Research suggests that many people suffer from symptoms caused by sleep disorders. In search of a remedy, a lot of people turn to technological aids. Alarm clocks based on sleep cycle evaluation are particularly popular these days. Implementations on smartphones, making use of the built-in accelerometer, are available and heavily used. The functionality of these applications however is limited to that of classic sleep cycle alarm clocks and does not make full use of the smartphones wide range of capabilities. Furthermore the interpretation of the data acquired by these applications is difficult due to a lack of reference values. In a new approach we view all the devices running our application as one distributed sensor network. For improving the significance of the recorded information a comparison to other users is important for evaluation. Our application should also present more detailed statistics compared to existing solutions to facilitate the interpretation for the user.

Requirements

Any student is welcome to apply for the thesis! Good programming skills are recommended.

Interested? Please contact us for more details!

Contact

- Johannes Schneider: schneider@tik.ee.ethz.ch, ETZ G61.3,
- Roger Wattenhofer: wattenhofer@tik.ee.ethz.ch, ETZ G63