



BA/MA/SA/Group/Lab:

## Android Benchmarking

Buying a new smartphone has become more and more difficult. They differ in many aspects, e.g., the camera, radio modules, processor, memory, or the quality of the software running on said hardware. Since device manufacturers tend to add loads of custom parts to the AOSP system, real world performance on otherwise equal hardware may vary greatly. Do you know how much you'll gain by having Snapdragon 810 compared to a Snapdragon 808? Is worth it if you're therefore stuck with a manufacturer who has not patched a memory leak in the OS whereas another already has. Such small differences can greatly influence user experience.

Sadly, synthetic benchmarks cannot capture these and are also susceptible to cheating (which is quite common apparently).

To our knowledge, even so called "real world" benchmarks on Android fail to capture effects resulting from OS or UI customizations. In addition to that, these benchmarks usually spurt out a number that roughly correlates with the price of the device. But what we are truly interested in is how much time will be spent waiting on a device and how much waiting time can be saved by spending more money on a new device. Depending on what applications a user utilizes, a cheap phone might be sufficient while another user might want to spend some more money to get extra performance.

We want to create a novel benchmarking method for Android devices. We have many ideas on how to do this, and even the focus of the project can be greatly adapted to your interests.

**Requirements:** Good programming skills. The student(s) should be able to work independently on this topic!

**Interested? Please contact us for more details!**

### Contacts

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