



Software Lab:

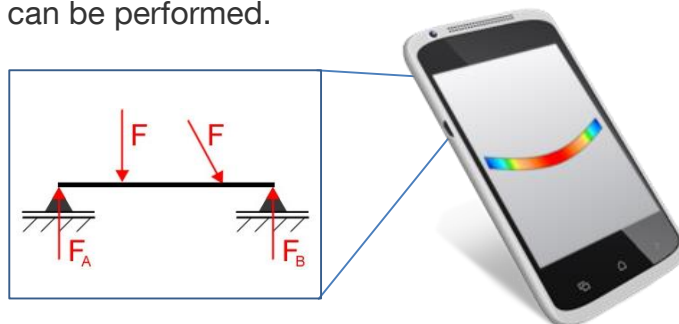
Mathematics: ★★☆☆☆
Programming: ★★★★★
Effort: ★★★★★

Development of a recognition and analysis application for 2D structural systems

Setting

While planning and developing structural systems it is usually necessary to examine several different approaches. To validate these, it is necessary to bring the models from paper into the computer, i.e. input of the system into a static analysis program.

Goal of this software lab is to bypass the costly modeling process of the system in a static analysis program. Therefore an application shall be developed, that allows the user to take a picture of a hand-drawn sketch of a 2D static system and delivers a model, on which a finite element analysis can be performed.



Devices which allow to use such an application properly are smartphones and tablet computers. Hence, the application shall be designed for the use on different platforms.

Task

- Create an application that allows to
- make a photo of a 2D structural system,
 - detect and model the system and
 - subsequently perform a static analysis.

Software

- Qt IDE
- OpenCV
- OpenGL



Supervisors

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