Gamification of Program Analysis Tools

Description:
In current software engineering practice, automated program analysis is often used to detect bugs and security vulnerabilities in the source code. However, developers struggle to interact with the interfaces of analysis tools, leading to the proliferation of preventable bugs.

In collaboration with Software AG, Paderborn University aims to design and prototype a reporting system for analysis tools which reports bugs in a user-friendly way, and engages the code developer through elements of gamification.

We are recruiting student assistants to help with the prototyping and evaluation of the reporting system. In this project, students will develop a platform for simulating the use of an analysis tool and prototype different User Interfaces (UI) on this platform. Students will also run surveys and user studies on those prototypes. This will incur work in collaboration with the Software AG teams worldwide.

In this project, students will learn about program analysis, user studies and UI design, as well as interact with a team of other students, researchers, and professional developers at Software AG. Knowledge of those topics is not needed, but useful. We require that applicants have strong coding skills, are able to work autonomously, and have a working knowledge of English.

Available positions:
• SHK or WHB (student assistant) positions.
• Looking for students currently studying towards their Bachelor or Master.
• Working time: 9.5 or 19 hours per week, to be discussed.
• Project duration: Mid-November 2018 to Mid-November 2019.
• Language: English, informal communication can be in French or German.

Tasks:
• Develop a simulation platform for using analysis tools. The technologies will be determined in the project.
• Participate in designing and implementing UI prototypes on the simulation platform.
• Run surveys and user studies at Software AG.
• Extract data from the surveys and user studies.

Skills required:
• Strong coding skills.
• Working knowledge of English.
• Prior knowledge of static analysis is helpful, but not required.
• Prior knowledge of UI design and user studies is helpful, but not required.

Interested?
Send your CV to Lisa Nguyen <lisa.nguyen@upb.de>