Seminar: Human Factors in Software Engineering (HFSE)

Software is created (mostly) for people and by people. The software development life-cycle foresees roles covered by different individuals interacting with each other as well as with the involved stakeholders. While processes and tools are essential for the success of a software product, it is ultimately humans who carry out processes and use tools. Humans are a vital and central part of software engineering. We, as researchers, need to understand software practices, processes, and tools as carried by humans and its impact on humans. In turn, this enables us to design and build support mechanisms to improve all aspects of software development, and the use and evolution of deployed software systems.

Organizer

The seminar will be held, organized, and graded by Dr. Daniel Graziotin, daniel.graziotin@iste.uni-stuttgart.de.

Process, outcomes

We expect you, as a participant to the seminar to:

1. Take responsibility of a topic related to human factors in software engineering.
2. Conduct an extensive literature review of the topic.
3. Summarize the outcomes of the review and reason about it in terms of implications for research and implications for practice.
4. Engage in class to provide feedback to your peers.

Points 1-3 are to be covered in two outcomes:

• Presentation of plans and intermediate results in keynote-format during the semester.
• Report as an academic paper (6+ pages, double column, IEEE format for conference proceedings) by the end of semester lecture time.

Topics

Studies of human factors in software engineering include, but are not limited to, communication issues, culture, social aspects of teams, motivation, personality, feedback loops, code comprehension, economic aspects, decision-making processes.

Example topics: https://pastebin.com/dbdD9YHR

Notes

• We welcome participants to continue their proposed designs, or anything related to them, as research projects or B.Sc. theses once the seminar is over.

• The entire seminar, including its outcomes, is in English. Grading is not influenced by English proficiency.

• You do not need to do anything before the seminar kick-off, including topic selection. Everything is handled after the seminar starts. Questions are, of course, welcome.