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Grip on software: understanding development progress of SCRUM sprints and backlogs

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Stellingen

Behorende bij het proefschrift

Grip on Software: Understanding development progress of SCRUM sprints and backlogs

1. Data-oriented research should integrate data-driven development to construct analytical pipelines that are not shelved after one-time use. (Chapter 2)
2. Generalization of database models helps reusability and performance, e.g., by implementing dynamic query templates that select the relevant entities and relationships. (Chapter 3)
3. SCRUM and other Agile software development methods value response to change over following a plan, nevertheless predictive models support both aspects in short-term sprint effort estimation and long-term backlog size forecasting. (Chapter 4)
4. By putting focus on the data that stakeholders find important, yet allowing experts to zoom into details at their request through intuitive controls, a visualization turns information into knowledge that enriches the existing development process. (Chapter 5)
5. Data streams nourish the surrounding software ecosystem, where a pipeline that channels the flow of high-quality data serves as flood prevention.
6. The best kind of machine learning highlights important, explainable patterns related to the real world and does not simply generate more data to analyze.
7. An analogy is like an indirect self-reference in that this appears to remain inside the context of a corpus, but in fact this incites the reader to think outside the box.
8. Open science principles for data, publications and software ought to include an assumption of collaboration and not be hindered by contractual funding requirements.
9. It is too binary to expect people to exhibit the same behavior after a pandemic or other impediment, whereas we should take the time for a retrospective to learn and adapt.
10. Predicting is hard, especially when it comes to events that take place on Friday the 13th.

Leon Helwerda
Leiden, September 13, 2024