Master-Thesis Description, Max Capraro

A Representative Analysis of Bug-Tracker Related Code and Process Metrics

This thesis reviews bug tracker related metrics and their effectiveness with respect to predicting future bugs and other desired target measures. It does so using the Ohloh open source project database; a main strength of the results are their representativeness. The main result is a set of validated or invalidated claims of those metrics and their implementation for the Ohloh open source project database.

Work Results

- Literature review
  - Bug tracker metrics
    - Other metrics with suspect or proven correlations to bug tracker metrics
  - Needs of software project managers relating to bug tracker information
    - To classify importance of known metrics
- Integrating object-oriented model of bug tracker data
  - As needed to showcase the metrics above
  - If required by industry partner, thesis may be kept confidential
    - Publications should be possible on a fairly abstract model level
- Implementation of a set of relevant metrics based on the Ohloh database
  - For the thesis, only the back-end is relevant; no UI needed
  - In sufficient depth as agreed upon with industry partner
- Evaluation of some or all chosen metrics as to
  - quality criteria of original claims (external validity, etc.)
  - potential other effects (thesis observations)
  - using the representative data set of Ohloh

Thesis Advisor

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