Code as a Crime Scene

Uncovering complexity in large-scale software projects

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Five Symptoms of Complexity

1. Expensive maintenance
2. Large-scale refactorings
3. Parallel development
4. Opaque project state
5. Automated test death march
“Syntactic complexity metrics cannot capture the whole picture of software complexity” (Herraiz & Hassan)

“The use of metrics to manage software projects has not even reached a state of infancy” (Glass)
Profiling The Ripper

Dragnet analysis of 5 murder locations & graffito

The application of Dragnet software developed by David Canter to the main crimes attributed to Jack the Ripper. Further details from dvcanter@btinternet.com  www.davidcanter.com
James Maybrick – The Ripper?

Dragnet analysis of 5 murder locations & graffito

Middlesex Street is the Location of Jack the Ripper’s residence as indicated in his (disputed) diary.

Picture and permission provided by Professor David Canter, http://www.davidcanter.com
Welcome to Code City

Code City: http://www.inf.usi.ch/phd/wettel/codecity.html
Heat Maps

Models

Views

Test
Geographic Profiling of Code

Implicit Dependency
Parallel Work: Quality and Defects
Interaction Patterns: Applications

Detect
Inform
Guide
Emergent Modularity

browser
  places
    themes

hidden modularity?

toolkit
  content
    places
      themes
Feedback on Automated Tests

zarathustra:cogdrm-web adam$ lein test

lein test cogdrm-web.models.drm-lists-test
lein test cogdrm-web.models.drm-reco-task-test
lein test cogdrm-web.models.drm-task-test
lein test cogdrm-web.models.nback-task-test
lein test cogdrm-web.models.statistics-test

Ran 33 tests containing 202 assertions.
0 failures, 0 errors.

Test stability

Normal
Warning
Deathmarch
Corrected a spelling error in the nback instructions.

Switched to MongoDB persistent sessions in order to scale on several web dynos.

Deadline
Modus Operandi
The Road Ahead

Read Patterns?
Inspection Guide?
Dynamic Predictions?
Thanks!

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