A Framework for Describing and Understanding Mining Tools in Software Development

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Introduction

• Software engineering is a collaborative activity → activity *awareness* is important
• Can be provided by mining software repositories
• A variety of mining tools → how to compare?
• Do we mine what is easy to mine and think about the uses for it later?
Proposal

• Develop a framework for describing tools for mining software repositories

• Purpose:
  • Help designers understand and compare tools
  • Assist users assess tools
  • Identify new research areas

• Keep the specific user needs and tasks in the forefront!
The Framework

• Intent
  • Role, time, cognitive support

• Information
  • Change management, program code, defect tracking
  • Informal communication, local history, correlated information

• Infrastructure
  • Requirements, offline/online, storage backend
What Next?

• Applied the framework to three tools:
  • softChange
  • Hipikat
  • Xia/Creole

• We invite researchers to apply it to their tools and give us feedback on their experiences