| | | |
|---|---|---|
| 《Developer recommendation with K-nearest-neighbor search and expertise ranking》 | 2011 | APSEC |
| 《A Statement Level Bug Localization Technique using Statement Dependency Graph》 | 2017 | ENASE |
| 《Bug prediction based on fine-grained module histories》 | 2012 | ICSE |

# Developer recommendation with K-nearest-neighbor search and expertise ranking

2011 APSEC

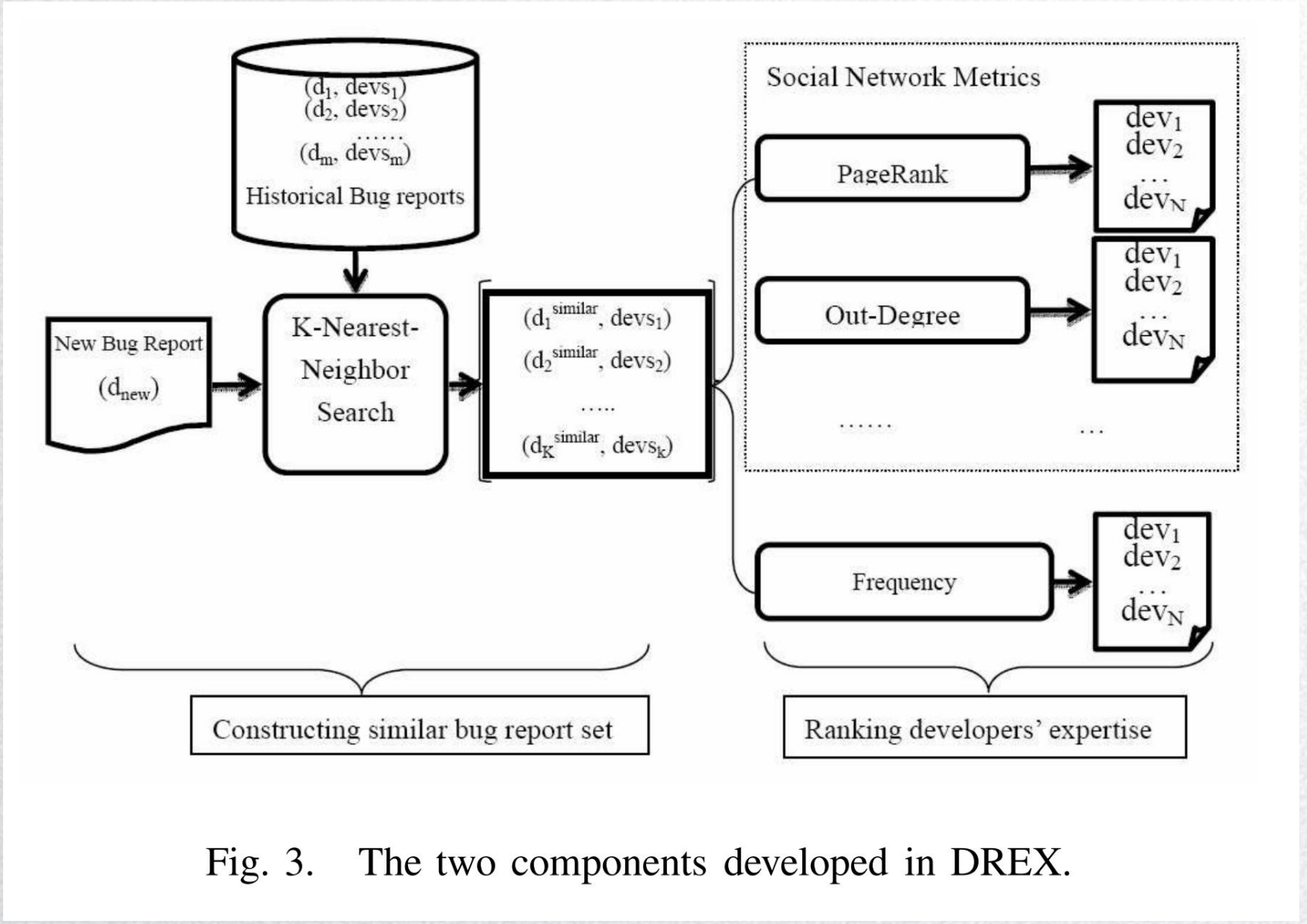



Fig. 3. The two components developed in DREX.

- Indegree
- Outdegree
- Degree
- PageRank
- Betweenness
- Closeness

# A Statement Level Bug Localization Technique using Statement Dependency Graph

2017 ENASE

SBL(Statement level Bug Localization)

Irrelevant search space minimization but maximizing relevant data domain

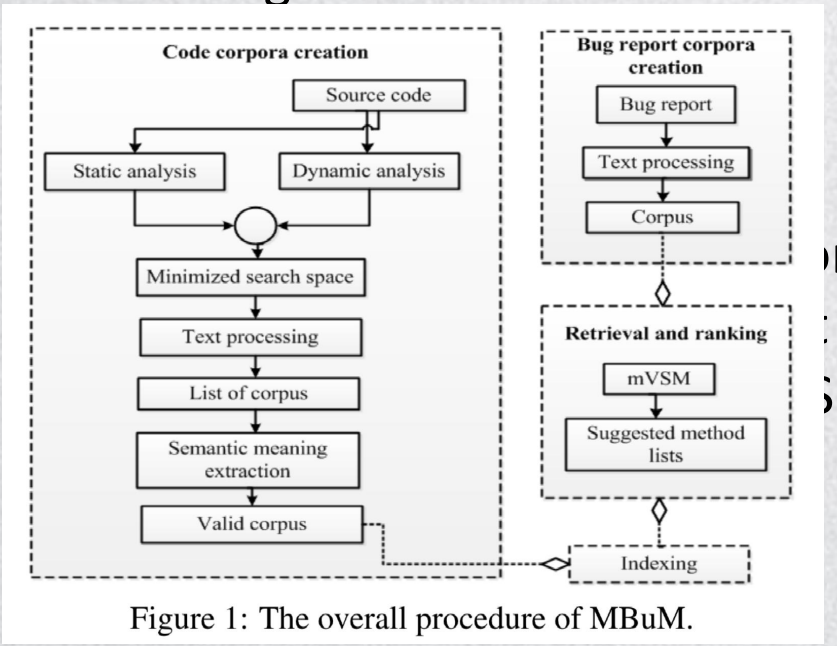



Figure 1: The overall procedure of MBuM.

The ranking of buggy statements from that relevant data domain

…n of Method
… Dependency
…SDG)

Generation of Node Predecessor-node Dependency Graph (NPDG)

# Bug Prediction based on Fine-grained Module Histories

2012 ICSE

## Code-Related Metrics

Nagappan and Ball proposed code churn metrics, which measures the changes made to a module over a development history.

## Process-Related Metrics

- Changes, fixes, past bugs, etc.
- Cache-based approach.
- Process complexity metrics.

## Organizational Metrics

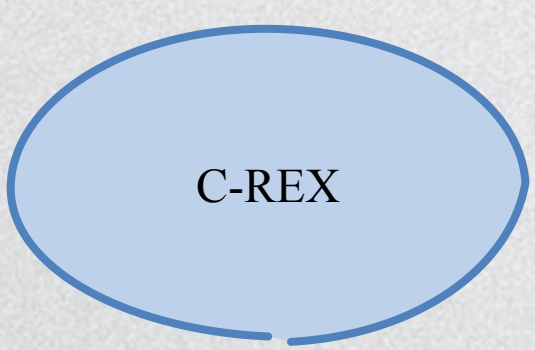
- Number of developers.
- Structure of organization.
- Network metrics.
- Ownership.

## Geographical Metrics

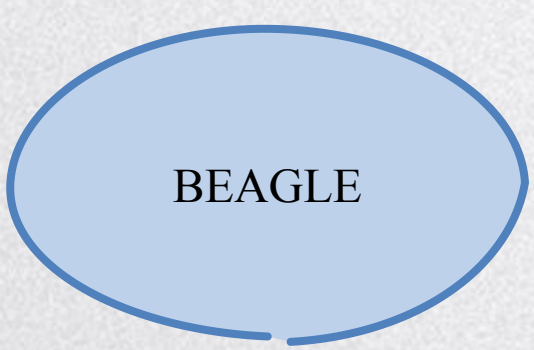
Geographical metrics are measured for assessing the risks of distributed development

# Bug Prediction based on Fine-grained Module Histories

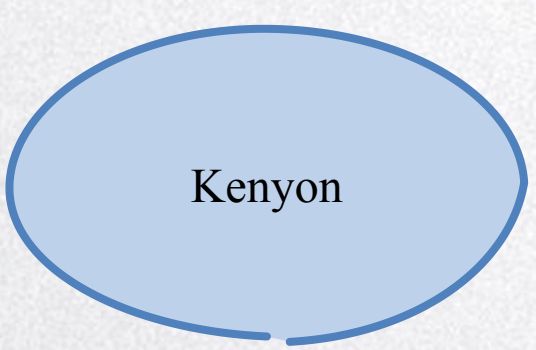
2012 ICSE



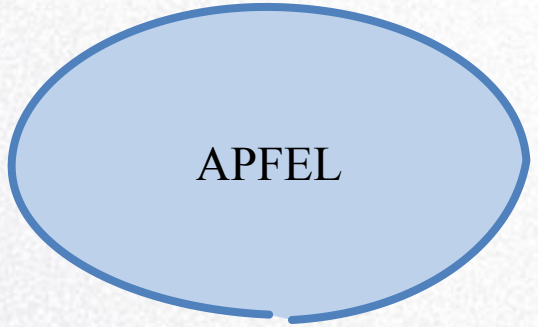

C-REX is an evolutionary extractor. It records fine-grained entity changes over the development period.




BEAGLE is a research platform. Using origin analysis, it can identify rename, move, split, and merge.




Kenyon is designed to facilitate software evolution research.




APFEL collects fine-grained changes in relational databases.