

## Assisting Bug Report Triage through Recommendation

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### **Abstract:**

A key collaborative hub for many software development projects is the issue tracking system, or bug repository. The use of a bug repository can improve the software development process in a number of ways including allowing developers who are geographically distributed to communicate about project development. However, reports added to the repository need to be triaged by a human, called the triager, to determine if reports are meaningful. If a report is meaningful, the triager decides how to organize the report for integration into the project's development process.

Triagers can become overwhelmed by the number of reports added to the repository. Time spent triaging also typically diverts valuable resources away from the improvement of the product to the managing of the development process. To assist triagers, this talk presents a machine learning approach to create recommenders that assists with one common triager decision: the assignment of the report to a developer. The recommenders created with this approach are accurate: recommenders for which developer to assign a report have a precision of 70% to 98% over five open source projects. In addition, we present an approach to assist project members to specify the project-specific values for creating a developer recommender and show that such a recommender can be created with a subset of the repository data.

### **Biography:**

Dr. John Anvik's research focuses on reducing the management overhead in software development. Currently he is looking at how to improve the management of bug reports. His career has spanned both academia and industry having been a researcher at several universities, taught undergraduate classes, worked as a software developer and as a training manager for a small web-GIS company. He currently lives in Victoria, BC, Canada.