

# Masters Final Oral Defense

Friday, April 14th, 2017  
223 Atanasoff at 12:00 p.m.

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## Candoia: A Platform for Building and Sharing Mining Software Repositories Tools as Apps

We propose Candoia, a novel platform and ecosystem for building and sharing Mining Software Repositories (MSR) tools. Using Candoia, MSR tools are built as apps, and Candoia ecosystem, acting as an app store, allows effective sharing. Candoia platform provides data extraction tools for curating custom datasets for user projects and data abstractions for providing uniform access to MSR artifacts from disparate sources, which makes apps compatible and adoptable across diverse software project settings of MSR researchers and practitioners. The structured design of a Candoia app and the languages selected for building various components of a Candoia app promotes easy customization. To evaluate Candoia we have built over two dozen MSR apps for analyzing bugs, software evolution, project management aspects, and source code and programming practices showing the applicability of the platform for building a variety of MSR apps. For testing compatibility of apps across diverse project settings, we tested the apps using ten popular projects, such as Apache Tomcat, JUnit, Node.js, etc and found that apps required no changes to be compatible. We performed a user study to test customizability and we found that five of eight Candoia users found it very easy to customize an existing app. Candoia is available for download from <http://candoia.github.io/>.

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