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Graduate Research Symposium

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## Toward a containerized pipeline for longitudinal analysis of open-source software projects

Allan Miller  
amiller17@luc.edu

George Thiruvathukal  
*Loyola University Chicago*

Konstantin Laufer  
*Loyola University Chicago*

Emmanuel Amobi

Sean Higgins

*See next page for additional authors*

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**Presenter Information**

Allan Miller, George Thiruvathukal, Konstantin Laufer, Emmanuel Amobi, Sean Higgins, Linette Maliakal, Emily Meister, Jean-Luc Putter, Alex Rose, Nicholas Synovic, Sophie Von Hatten, Jonathan Warkentin, and Martin Zugschwert



Preparing people to lead extraordinary lives

# Toward a containerized pipeline for longitudinal analysis of open-source software projects

Allan Miller, Emmanuel Amobi, Sean Higgins, Linette Maliakal, Emily Meister, Jean-Luc Putter, Alex Rose, Nicholas Synovic, Sophie Von Hatten, Jonathan Warkentin, Martin Zugschwert, Konstantin Lauer and George K. Thiruvathukal  
Loyola University Chicago, Chicago, Illinois, USA



## Research Goal

Develop a research pipeline for investigating software metrics of GitHub projects known to indicate project health and code quality. Our design approach aims to be:

- Language Agnostic
- Modular
- Parallel/Distributed (Efficient)
- Visually-Appealing

## Language Agnostic

GitHub Projects contain many file types for different source languages.

Instead of analyzing each language separately, our pipeline is focused on process metrics:

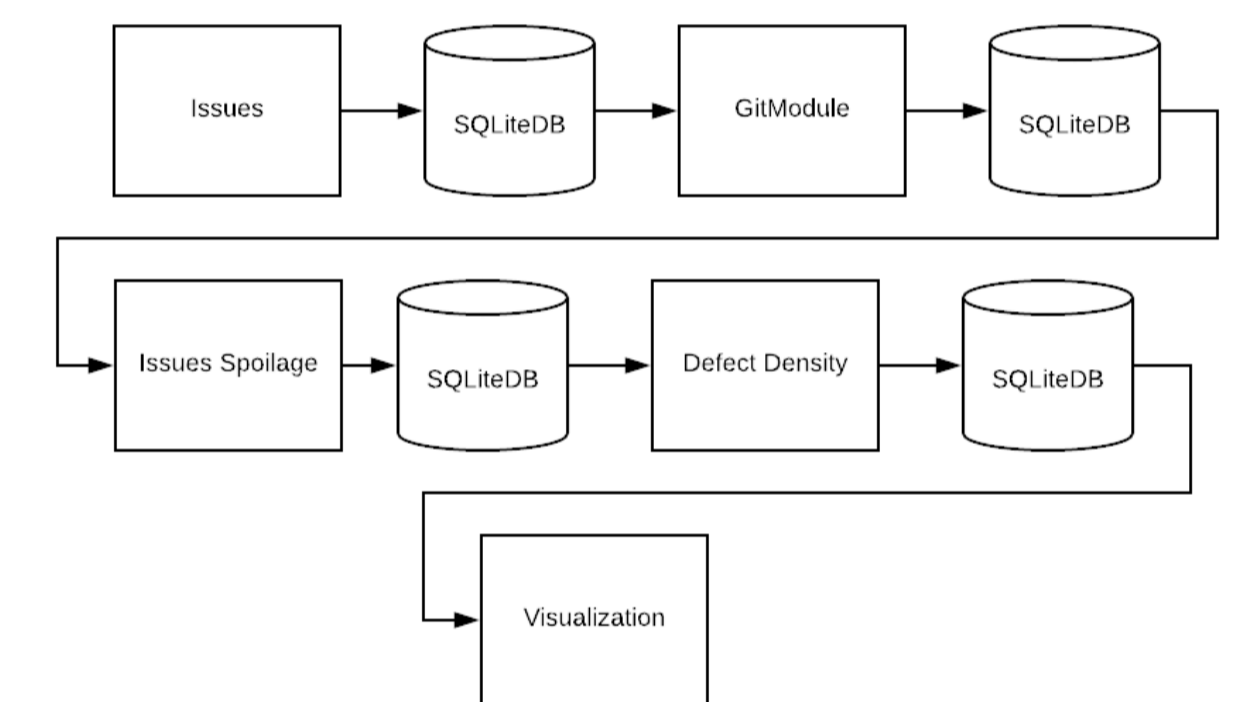
- Defect Density
- Issue Spoilage

## Example Visualization from Our Pipeline



## Dockerized Modular Pipeline

### Modular Sequence:



## Acknowledgments

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- Previous work: <https://arxiv.org/abs/1804.02053>