Metrics Pipeline (Codename): An Analytics and Visualization Pipeline for Software Quality Metrics

Nicholas Synovic, Emmanuel Emobi, Erik Greve, Sophie von Hatten, Austin Pinderski, Stephanie Rodriguez, Martin Zugschwert, Jamie C. Davis, Nicholas J. Hayward, Konstantin Laufer, and George K. Thiruvathukal
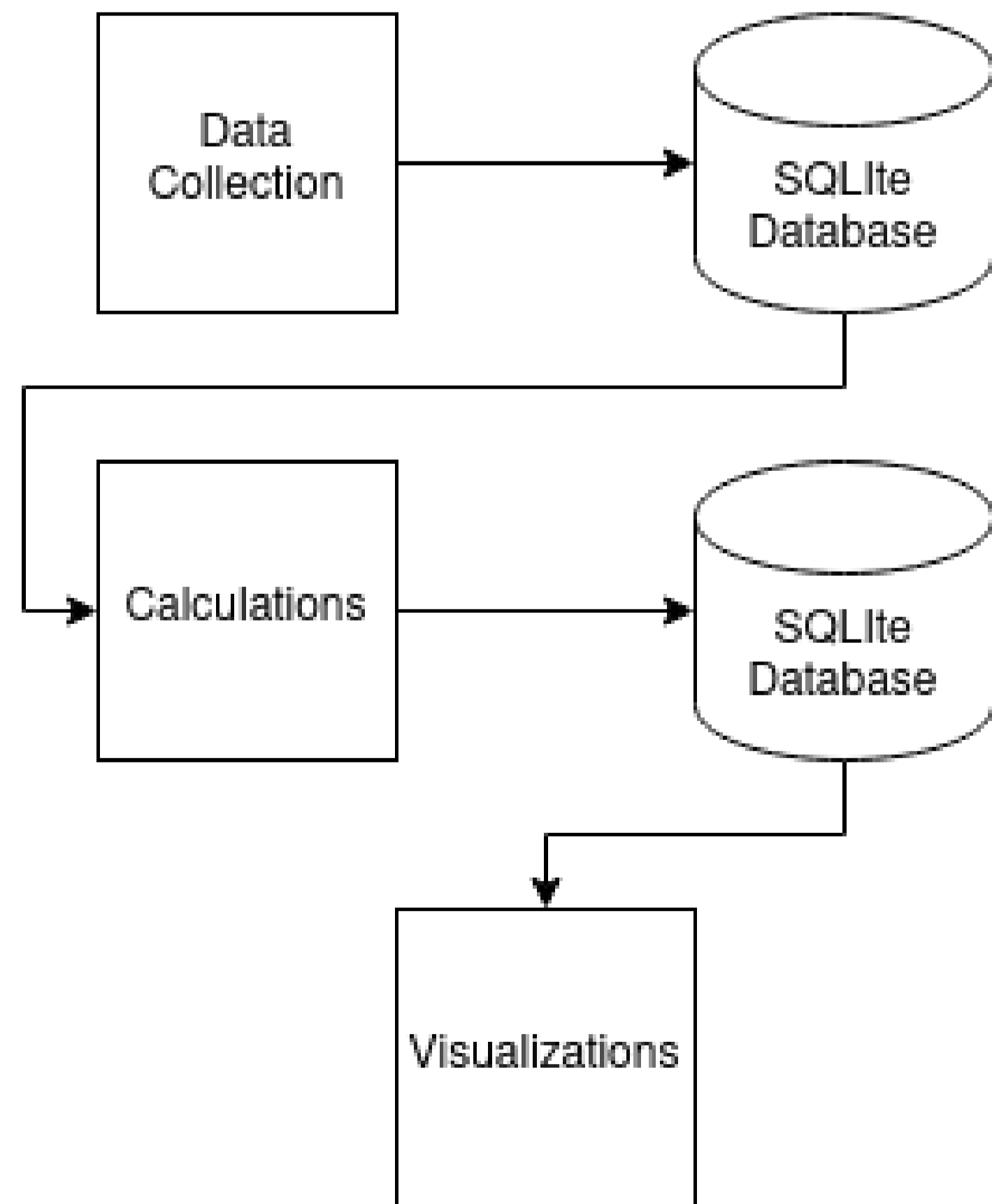
Loyola University Chicago, Chicago, Illinois, USA

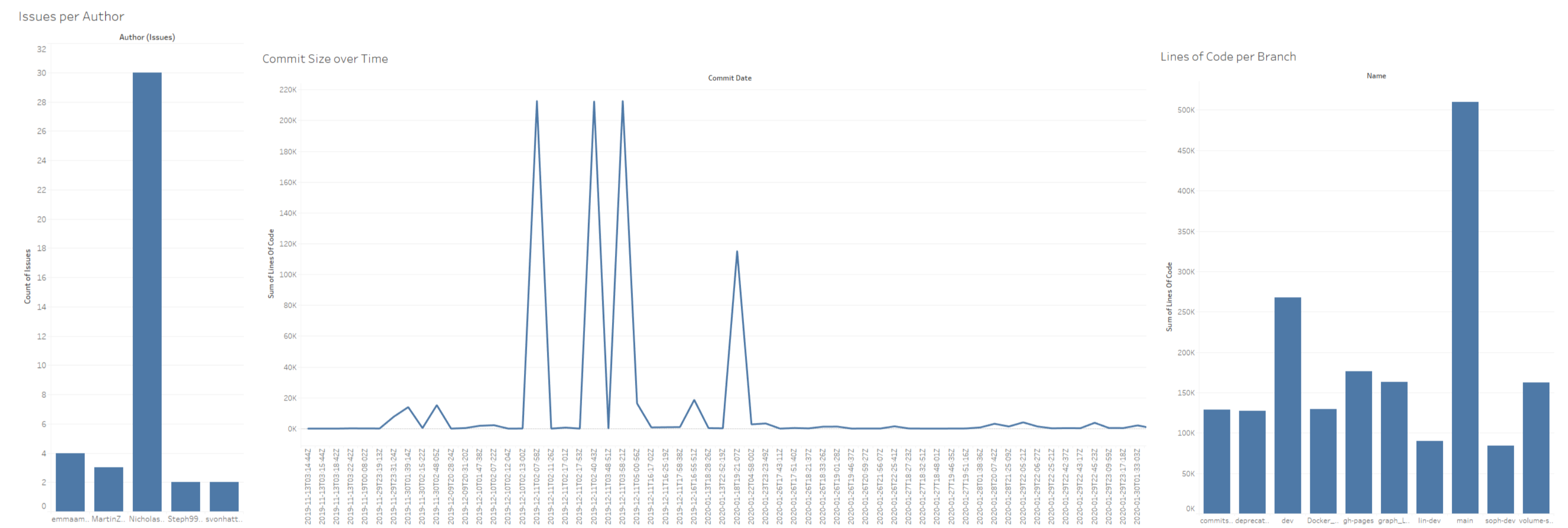LOYOLA
UNIVERSITY CHICAGO
AD · MAJOREM · DEI · GLORIAM
1870

Preparing people to lead extraordinary lives

Goal

A platform for producing and observing metrics by mining open-source software repositories on GitHub.

Pipeline Process

Process for Collecting Data and Calculating Metrics:

Graphs

Calculated Metrics

- **Defect Density:** The amount of open defects in a repository compared to the total LOC
- LOC per Commit: Total LOC affected per commit
- Issues per Author: Total number of issues opened per contributor
- Issue Spoilage: The number of days open summed across all issues
- Lines of Code: The total number of lines of code
- Commits Over Time: The total number of commits
- Lines of Code per Language: The total number of LOC per language

Acknowledgments

LaTeX TikZposter