

Gengyi Sun

University of Waterloo

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Full-Length Publications (10 pages or more) in International Conference Proceedings

FSE'24 Gengyi Sun, Sarra Habchi, Shane McIntosh. **RavenBuild: Context, Relevance, and Dependency Aware Build Outcome Prediction**. In Proc. of the Int'l Sym. on the Foundations of Software Engineering (ACM), pp. 1–24 (To appear), Jul. 2024. Acceptance Rate: 121/483 (25%).

ICSE'24 SEIP Gengyi Sun, Mehran Meidani, Sarra Habchi, Mathieu Nayrolles, Shane McIntosh. **Code Impact Beyond Disciplinary Boundaries: Constructing a Multidisciplinary Dependency Graph and Analyzing Cross-Boundary Impact**. In Proc. of the Int'l Conf. on Software Engineering, Software Engineering in Practice track (ACM/IEEE), pp. 122–133, Apr. 2024. Acceptance Rate: 45/120 (38%).

Industrial Experience

Research and Development Intern ([Ubisoft](#), [La Forge](#)) **Toronto** Sept. 2022 - present

Researched the Continuous Integration (CI) process in the context of video games.

Dependency Graph Analysis

Formulated empirical analysis to identify changes of higher risks based on the dependency graphs of the video game project.

Build Outcome Prediction

Developed a context, relevance, and dependency-aware method that outperforms the state-of-the-art of build outcome prediction. Proposed strategies to reduce CI costs and improve CI stability. *Multiple teams at Ubisoft have invested in developing API services to enable internal feedback cycles for this project.*

Blog

Build Outcome Prediction - Saving Time and Resources [Ubisoft La Forge](#) **Apr. 2024**

This blog is published by the official [Ubisoft LinkedIn](#) account, which has more than one million followers.

Presentations

RavenBuild: build outcome prediction at FSE2024 (on-going) **Porto de Galinhas** July. 2024

Code impact beyond disciplinary boundaries at ICSE2024 **Lisbon** Apr. 2024

Taming the beast: use ML to curb CI costs at *Ubisoft Developer Conference (UDC) 2024* **Montréal** Feb. 2024

UDC is a Ubisoft internal application-based conference. This talk is broadcast online to all Ubisoft employees globally (800 onsite viewers and 3,469 online viewers).

Awards

SIGSOFT CAPS Travel Grant to Attend FSE 2024 **Apr. 2024**

SIGSOFT CAPS Travel Grant to Attend ICSE 2024 **Feb. 2024**

1 of 99 awardees

Education

Ph.D, Computer Science *University of Waterloo* **Waterloo, Ontario** May. 2024 - Present

Supervisor: Prof. Shane McIntosh

MMath, Computer Science *University of Waterloo* **Waterloo, Ontario** Sept. 2021 - Dec. 2023

Supervisor: Prof. Shane McIntosh

Thesis: Quantifying, Characterizing, and Leveraging Cross-Disciplinary Dependencies: Empirical Studies from a Video Game Development Setting

B. Software Eng *McGill University* **Montréal, Quebec** Sept. 2017 - Apr. 2021