

Gengyi Sun

 <https://sungengyi.github.io/>

 [LinkedIn](#)

 [ORCID](#)

 [Google Scholar](#)
 gengyi.sun@uwaterloo.ca

Publications

International Conference Proceedings

- ASE'25** Gareema Ranjan, Mahmoud Alfadel, [Gengyi Sun](#), Shane McIntosh. The Cost of Build Tool Downgrades: An Empirical Study of the Kubernetes Project. *In Proc. of the International Conference on Automated Software Engineering (ASE)*, To appear, Nov. 2025.
- 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. 45:1–45:23, Jul. 2024.
- 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.

Short International Conference Papers

- ICSE'25 DS** [Gengyi Sun](#). Intelligent Automation for Accelerating the Repair of Software Build Failures. *In Proc. of the Int'l Conf. on Software Engineering, Doctoral Symposium track (ACM/IEEE)*, Apr. 2025.

Blogs

- Ubisoft** [Gengyi Sun](#). Build Outcome Prediction - Saving Time and Resources. Ubisoft, La Forge, Canada. Apr. 2024.
 This blog is published by the official [Ubisoft LinkedIn](#) account, which has more than one million followers.

Theses

- MMath** [Gengyi Sun](#). Quantifying, Characterizing, and Leveraging Cross-Disciplinary Dependencies: Empirical Studies from a Video Game Development Setting. University of Waterloo, Canada. Dec. 2023.

Industrial Experience

Research and Development Intern (*Ubisoft, La Forge*) **Toronto, Canada** Sept. 2022 - Sept. 2024
 Researched the Continuous Integration (CI) process in the context of video games.

Dependency Graph Analytics

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

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. *This work was also presented at Ubisoft Developer Conference 2024 and [Game Developer Conference 2024](#), attracting interests from within and outside of the company.*

Committee Service

- ICSE'26** Shadow Research Track PC, International Conference of Software Engineering

MSR'25 Junior PC for Technical Papers, International Conference of Mining Software Repositories

Academic Collaboration

Visiting Researcher *POSL Research Group, Kyushu University* **Fukuoka, Japan** *Feb. - Apr. 2025*

Collaborated with Prof. Yasutaka Kamei on research related to automatically addressing software build failures.

Awards

David R. Cheriton Graduate Scholarships *Sept. 2025*

\$20,000 total, 2024 - 2025

David Johnston International Entrance Scholarship *Apr. 2025*

\$5,000

Outstanding Poster Presentation on the Consortium for Software Engineering Research *Nov. 2024*

Arthur Levine SURE Award *May. 2020*

Presentations

Invited Presentations.....

Taming the beast: use ML to curb CI costs *at UDC 2024* **Montréal, Canada** *Feb. 2024*

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

Activities

Computer Science Departmental Director *MathGSA, University of Waterloo* *Sept. 2025 - present*

President *Computer Science Graduate Student Association, University of Waterloo* *Jul. 2024 - Aug. 2025*

Student Volunteer *ICSE'25* *May. 2025*

Student Volunteer *FSE'24* *Jul. 2024*

Ubisoft Ambassadors *Hack-The-North 2023* *Sept. 2023*

Education

Ph.D, Computer Science *University of Waterloo* **Waterloo, Canada** *May 2024 - present*

Supervisor: Prof. Shane McIntosh

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

Supervisor: Prof. Shane McIntosh

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