

RIORDAN DERVIN ALFREDO

Mobile: 0449 091 145 | Email: riordan.alfredo@gmail.com | GitHub: <https://github.com/riordanalfredo>

Website: <https://rioalfredo.com> | LinkedIn: <https://www.linkedin.com/in/riordan-alfredo/>

Address: 318 Queen Street, Melbourne, VIC 3000, Australia

Summary

I am a dedicated Teaching Associate and Research Assistant at the Faculty of IT, Monash University, specialising in core software engineering units. A profound interest in human-centred design, educational technology, and the transformative potential of Learning Analytics and Artificial Intelligence in Education drives my academic journey. I am pursuing a PhD in this field to explore innovative human-centred methods to design educational innovations with stakeholders. With my Bachelor of Software Engineering (Honours), first-class honours, I possess a solid foundation in both theoretical and practical aspects of technology integration in education. My commitment to sustainability, scalability, and practicality informs all my academic endeavours.

Education

MAR 2022 - PRESENT	Doctor of Philosophy (Information Technology) Expected to graduate in September 2025 <u>Achievement:</u> LAK24 Doctoral Consortium awardee (US\$2000 + conference benefits)	<i>Monash University, Australia</i>
JAN 2021 - JAN 2022	Graduate Diploma of Management (Learning)	<i>Altec College, Australia</i>
FEB 2017 - DEC 2019	Bachelor of Software Engineering (Honours), H1 <u>Achievements:</u> Monash Summer Research Scholarship (A\$5000 - 2018) and the highest Computer Networks grade (FIT4165 - 2019).	<i>Monash University, Australia</i>
OCT 2015 - NOV 2016	Diploma of Engineering (Engineering), GPA 3.4 <u>Achievements:</u> Academic Excellence in Introduction to Computer, Security & Network.	<i>Monash College, Australia</i>

Selected Publications

Alfredo, R., Echeverria, V., Jin, Y., Yan, L., Swiecki, Z., Gašević, D., & Martinez-Maldonado, R. (2024). *Human-centred learning analytics and AI in education: A systematic literature review*. Computers and Education: Artificial Intelligence, 6, 100215. <https://doi.org/10.1016/j.caeai.2024.100215>

Alfredo, R., Echeverria, V., Jin, Y., Swiecki, Z., Gašević, D., & Martinez-Maldonado, R. (2024). *SLADE: A Method for Designing Human-Centred Learning Analytics Systems*. LAK '24: 14th Learning Analytics and Knowledge Conference. ACM. <https://doi.org/10.1145/3636555.3636847>

Alfredo, R. D., Nie, L., Kennedy, P., Power, T., Hayes, C., Chen, H., ...Martinez-Maldonado, R. (2023). *StressViz: Designing a Stress Analytics Dashboard for Teachers*. LAK '23: 13th International Learning Analytics and Knowledge Conference. ACM. <https://doi.org/10.1145/3576050.3576058>

Other publications are available in my [Google Scholar](#) profile.

Professional Experience

SEP 2021 - JAN 2024	Research Officer (Educational Software Developer) <i>FIT Monash University, Australia</i> Projects: (1) Interactive writing tool powered with machine learning to detect knowledge-telling sentences; (2) text analysis interface and system to classify law case notes with modern deep learning model.
---------------------	--

- Designed and developed a full-stack AI-powered word processing web application powered by deep learning algorithms to support students' rhetorical writing moves and analysis (*MERN stack and PyTorch with HuggingFace models*).

JUN 2021 - PRESENT

Research Assistant (Software Engineer) *Faculty of IT Monash University, Australia*

Projects: Teamwork analytics in healthcare simulations and Classroom analytics

- Collaboratively develop a system to collect learners' multimodal data while streaming data for further analysis and visualisations (*MERN and Spring*).

JUL 2020 - PRESENT

Teaching Associate

Faculty of IT Monash University, Australia

FIT2099 (Object-Oriented Design and Implementation) – present

- Collaboratively design, write and develop assessments and unit content with the chief examiner. Maintain and develop a game engine (Java) for assignments.
- Successfully increased and maintained unit's performance from "needing improvement [Poor]" in 2020 to "meeting expectations [Good]" (by +7.46%) in 2021 to date.
- Attained a "Sessional Teaching Associate Excellence" award in 2022 and was nominated by students every year.

FIT3170 (Software Engineering Practice) – present

- Mentoring 8 groups of software engineering students (15 students each, 2 groups every year) on various industrial projects with SAFe framework and agile methodologies. Available projects: <https://github.com/Monash-FIT3170>

FIT3077 (Software Engineering: Architecture and Design) – 2022

- Led teaching team, organised meetings, and developed assignment instructions.
- Designed and developed a fully authenticated web service (Django) that serves APIs to allow students to design and develop client-based applications as part of unit assessments.

AUG 2019 - AUG 2020

Software Developer & Junior Researcher

Billow Software, Australia

Projects: Web applications for bridging the gap between civil construction companies.

Participated in a research project about deep learning on recommender systems for civil construction safety.

- Led various small software projects that involved various stakeholders (e.g., tradies, managers, and administrators) by maintaining quality and ensuring on-budget and on-schedule delivery.
- Designed, developed, and tested the support desk application with Socket.IO for the notification system that significantly improved the workflow of the IT support team in handling customers' queries and issues.

Skills

Programming Languages: **JavaScript***, TypeScript, Python, Java, HTML5, CSS3, Matlab, SQL, C++, C#, C, R

Programming Frameworks & Tools: **React***, Django, **NodeJS***, PyToch, GitHub CI, Docker, Microsoft Azure

Language Proficiency: Bahasa Indonesia (Native); English (Bilingual)

**proficient*

Professional References

Available upon request.