



RESEARCH AND TEACHING INTERESTS

I currently work as an **Assistant Lecturer** (Teaching and Research Fellow) at Embodied Visualisation (EmVis) research group, Monash University. I work with Tim Dwyer on Immersive Analytics research and with Pari Delir Haghighi on Construction Site Safety (industry-funded project). I received my PhD from the EmVis group in 2023.

I've been doing research in the Human-computer Interaction (HCI) field for more than 7 years. My research focuses on topics such as novel and effective interactions in immersive space, spatial cognition and perception, and AI in Immersive Analytics. I'm now leading a faculty-funded project named **Automating Brain Tumour Segmentation and Visualisation using Deep Learning in Augmented Reality**. I'm also working on a Building CRC project for **Construction On-Site Safety via Computer Vision, Large Language Models, and Mixed Reality**.

I also have six years of teaching experience at Monash University and the University of Melbourne as a lecturer, head tutor, and sessional tutor. My teaching units include **Research Methods, Data Visualisation, User Interface Design and Usability, Web Fundamentals, Mobile Application Development, and Full-stack Development** for both Bachelor and Master students. I have experience supervising Master's minor thesis and Bachelor's final-year project students.

EDUCATION

Monash University

Doctor of Philosophy, Computer Science
2019 – 2023

Monash University

Master of Information Technology
2017 – 2018

University of New South Wales

Bachelor of Science, Computer Science
2010 – 2013

RESEARCH INTERESTS

- Human-Computer Interaction
- Data Visualisation
- Immersive Analytics
- Spatial Cognition and Skills
- Embodied Interaction
- Digital Health
- Construction Safety Management

RESEARCH PAPERS

Jiazhou Liu, Kadek Satriadi, Barrett Ens, and Tim Dwyer, Investigating the Effects of Physical Landmarks on Spatial Memory for Information Visualisation in Augmented Reality. 2024 IEEE International Symposium on Mixed and Augmented Reality (ISMAR 2024)

Jiazhou Liu, Barrett Ens, Arnaud Prouzeau, Jim Smiley, Isobel Nixon, Sarah Goodwin, and Tim Dwyer, DataDancing: An Exploration of the Design Space for Visualisation View Management for 3D Surfaces and Spaces. 2023 ACM CHI Conference on Human Factors in Computing Systems (ACM CHI 2023)

Ang Li, Jiazhou Liu, Maxime Cordeil, Jack Topliss, Thammathip Piumsomboon, and Barrett Ens, GestureExplorer: Immersive Visualisation and Exploration of Gesture Data. 2023 ACM CHI Conference on Human Factors in Computing Systems (ACM CHI 2023)



GRANTS, AWARDS & SCHOLARSHIPS

ECA Seed Grant

Monash Faculty of Information Technology
2024 - 2025

Postgraduate Publication Award

Monash Graduate Research
2023

Graduate Research Completion Award

Monash Graduate Research
2022

Australian Research Training Program Scholarship

Australian Department of Education
2019 - 2022

Information Technology Postgraduate Scholarship

Monash University
2018 - 2019

ACADEMIC SERVICES

Conference Committee

iiWAS/MoMM 2025 - PC Member
ACM ISS 2024 - Web Chair
IEEE ISMAR 2023 - Web Chair

Paper Reviewer

ACM CHI 2020 (LBW), 2023, 2024, 2025
IEEE ISMAR 2025
IEEE VR 2021, 2025
IEEE VIS 2024
ACM ISS 2021, 2022

Workshop Organiser

ACM CHI 2022
Monash Take CTRL 2021

Student Volunteer

IEEE VIS 2021, 2022
ACM CHI 2020

RESEARCH PAPERS (CONT.)

Jiazhou Liu, Arnaud Prouzeau, Barrett Ens, and Tim Dwyer, **Effects of Display Layout on Spatial Memory for Immersive Environments**. 2022 ACM Interactive Surfaces and Spaces Conference (ACM ISS 2022)

Rhys Newbury, Kadek Ananta Satriadi, Jesse Bolton, Jiazhou Liu, Maxime Cordeil, Arnaud Prouzeau, and Bernhard Jenny. **Embodied Gesture Interaction for Immersive Maps**. 2021 Cartography and Geographic Information Science (CGIS '21)

Jiazhou Liu, Arnaud Prouzeau, Barrett Ens, and Tim Dwyer. **Design and Evaluation of Interactive Small Multiples Data Visualisation in Immersive Spaces**. 2020 IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR '20) [**Best Paper Nomination**]

DEMONSTRATION, POSTERS, AND WORKSHOP PROPOSALS

Jiazhou Liu, Aravinda S. Rao, Fucui Ke, Tim Dwyer, Benjamin Tag, Pari Delir Haghighi. **AR-Facilitated Safety Inspection and Fall Hazard Detection on Construction Sites**. 2024 IEEE International Symposium on Mixed and Augmented Reality.

Ang Li, Jiazhou Liu, Max Cordeil, Barrett Ens. Initial **Evaluation of Immersive Gesture Exploration with GestureExplorer**. 2022 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts. (IEEE VR '22)

Barrett Ens, Maxime Cordeil, Chris North, Tim Dwyer, Lonni Besançon, Arnaud Prouzeau, Jiazhou Liu, Andrew Cunningham, Adam Drogemuller, Kadek Ananta Satriadi, Bruce H Thomas. **Immersive Analytics 2.0: Spatial and Embodied Sensemaking**. In CHI Conference on Human Factors in Computing Systems (ACM CHI '22)

JIAZHOU 'JOE' LIU

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Personal Website



Assistant Lecturer

TALKS & PRESENTATIONS

Conference Presentation

IEEE ISMAR 2024
ACM CHI 2023
MEL-CHI 2023
ACM ISS 2022
IEEE VR 2020

Workshop Presentation

IEEE ISMAR 2024 - SafeAR
Monash Take CTRL 2021

Guest Lecturer/Presentation

Monash FIT3179 Data Visualisation 2021, 2022
Monash FIT5147 Data Visualisation 2019 - 2022

TECHNICAL SKILLS

Proficient

Kotlin, Java, Swift, C#, Unity, Tableau, R, Vega-lite,
JavaScript, D3, HTML, CSS, Adobe software, Python,
AngularJS, NodeJS

Familiar

Git, C, SQL, SharePoint, VUE, Flutter

REFERENCES

Prof. Tim Dwyer

Main Supervisor - Monash
Email: tim.dwyer@monash.edu

Dr Pari Delir Haghighi

Industry-funded Project Leader - Monash
Email: Pari.Delir.Haghighi@monash.edu

Dr Kadek Satriadi

Lecturer, Discipline Group Coordinator - Monash
Email: kadek.satriadi@monash.edu

TEACHING ACTIVITIES

University of Melbourne

- COMP90044 Research Methods (**Tutor**) [2024]

Monash University

- [FIT2095 Full stack development](#) (**Chief Examiner, Lecturer**) [2024 & 2025]
- [FIT2081 Mobile Application Development](#) (**Lecturer**) [2024 & 2025]
- [FIT1050 Web Fundamentals](#) (**Lecturer**) [2024]
- [FIT3179 Data Visualisation](#) (**Tutor/Head Tutor**) [2020 - 2025]
- [FIT316X Computer Science Project](#) (**Supervisor**) [2019, 2021 - 2022]
- [FIT5147 Data Exploration and Visualisation](#) (**Tutor**) [2022]
- [FIT3175 Usability](#) (**Tutor**) [2022]
- [FIT5152 User Interface Design and Usability](#) (**Tutor**) [2021]

INDUSTRY EXPERIENCE

IT Support SME (Casual)

Monash University, Clayton, VIC
2021 - 2023

SharePoint Consultant/Front-end Developer (Full-time)

WebVine, Redfern, NSW
2015 - 2016

Website Developer & Administrator (Full-time)

JJ Retails Pty. Ltd., Auburn, NSW
2015

Network Technician (Full-time)

HBC International, Auburn, NSW
2014 - 2015

