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TEACHING PHILOSOPHY AND PORTFOLIO

Software Engineering and Human-Centred Computing

October 2026 | Teaching statement and supporting evidence

Teaching approach

I teach software engineering through **building, explaining and improving software for people**. Students connect requirements with design decisions, test their solutions, and communicate limitations. I break complex work into stages, provide feedback students can act on, and ask them to justify decisions with evidence. The aim is to develop technical judgement alongside teamwork and professional communication, rather than reward only a polished final demonstration.

Experience and scope

From **2021 to 2024**, I taught tutorials or supervised projects in **five subjects at two Australian universities**. My responsibilities included workshops, consultation, requirements and prototype review, project guidance, marking and feedback, according to the subject.

- **The University of Melbourne:** COMP90082 Software Project; SWEN90009 Software Requirements Analysis; SWEN90014 Masters Software Engineering Project (project supervision, with tutoring/workshops in SWEN90014); ISYS90043 Enterprise Applications & Architectures (tutoring).
- **Deakin University:** SIT217 Introduction to Software Engineering (tutorials and practical support).

I also contribute to learning design in two courses at **Universitas Palangka Raya**: Human-Computer Interaction (1DCP353030, 2025) and Software Engineering (1DCP362030, 2026). These courses are led by Dr Devi Karolita; I collaborate with her and Dr Jialong Li of Waseda University. In 2026, I provided an invited recorded interview for Monash's AHC5002 Technology in Human Biomechanical Analysis. Together, these roles span eight teaching and learning-design contexts across four institutions.

Example 1: Accessibility throughout software design

Context and contribution. For Palangka Raya's Human-Computer Interaction course, I co-designed assignments and materials around redesigning Mobile JKN, Indonesia's national mobile health application. Four staged assignments embedded accessibility across the development process:

- **Discover and Design:** connect user evidence and personas with requirements and design choices.
- **Prototype and Evaluate:** apply accessibility guidance, examine the proposed interface and explain decisions through reflection.

The cross-phase persona activity encourages students to revisit assumptions as their solution develops. My contribution also included supporting evaluation of students' confidence and learning.

Evidence and reflection. The design is documented in our two-page ICSE 2026 Posters-track paper in the ICSE-Companion proceedings. A pre-course survey of 45 students identifies an initial learning need, not demonstrated post-course improvement. My teaching-development priority is to examine successive student artefacts alongside reflections to establish whether accessibility reasoning becomes more specific and defensible.

Evidence: course contribution; project and teaching artefact; ICSE-Companion paper.

Example 2: Evidence-grounded use of generative AI

Contribution. In the 2026 Palangka Raya Software Engineering course, I help design group-project tasks and materials using CRAFTER, our structured human-AI collaboration framework, and general-purpose generative AI. Students use interview evidence to create, review and refine artefacts such as personas and requirements. The learning focus is checking the basis for a claim, not simply generating more content.

I contributed pre- and post-course surveys, comparison activities and reflective questions. Analysis of student feedback and interaction histories examines prompting, refinement, evidence use and cognitive load. Evaluation is ongoing; I do not yet claim measured learning gains. This work informs an assessment approach that makes students' checking and revision visible alongside the final artefact.

Evidence: AI-integrated course design and research contribution.

Example 3: Professional learning through placements

Completed work. As a Monash Engineering industry-experience host supervisor, I supervised Khang Tieu and Yi Lai, who each completed a **115-hour placement** between November 2025 and February 2026. They delivered an integrated accessible wayfinding prototype, a demonstration, a README, a demo video and a handover documenting limitations. These tangible outputs demonstrate completed technical work and professional communication.

Two further students, Coeun Ham and Tony Tian-Yi Liang, are completing placements from July to October 2026. Their work connects evidence with virtual-reality filming scripts and compares manual and AI-assisted requirements work using de-identified consent interviews. Milestone discussions and review of the resulting artefacts connect technical progress with evidence use, human oversight and a usable handover.

Evidence: completed placements and outputs; Coeun's placement; Tony's placement.

Inclusive participation and industry relevance

My research with **people with intellectual disability and neurodivergent people** informs my attention to communication, choice and respectful participation. I would translate this experience into plain-language instructions, staged milestones, worked examples and accessible feedback opportunities, alongside university accessibility services for individual adjustments.

Partner-engaged work with **Wallara Australia and Waverley Social Enterprises** offers a basis for authentic software-engineering briefs: understanding workplace needs, negotiating requirements and evaluating accessible systems. Any use of partner data, participation or student placements would require agreement.

Reflection and future contribution

My strongest teaching contribution is in requirements engineering, software projects, human-computer interaction, software quality and responsible AI-supported development. I use consultation and project feedback to identify learning difficulties. My next development priority is to document how this feedback changes tasks and to examine subsequent student work with peer input. This keeps student satisfaction, participation and demonstrated learning distinct, while connecting each teaching decision to evidence.