



2027 Summer Research Project Template

Help us present your project in a way that connects with the right students. Thoughtful, engaging descriptions tend to attract stronger and more suitable applications. Thank you for putting a project forward - these programs rely on your contribution, and we couldn't do it without you.

Section	Description
Project title	Evaluating Video-Based Movement Processing for Paralympic Classification
Hours & delivery	6 weeks of engagement with 36 hrs per week, between 12 January – 20 February 2027 using a hybrid model at St Lucia and Online.
About the project (150–250 words)	Video-based movement analysis has the potential to provide accessible and scalable ways of assessing movement characteristics relevant to Paralympic classification. Our research program is developing a video-based processing system that uses computer vision to extract information about how a person moves from video recordings. This information can be used to calculate biomechanical measures and develop models that may help identify movement characteristics relevant to classification. A major focus of this project is to investigate whether this movement processing can be performed locally on a recording device, rather than relying on cloud-based processing. Local processing could make the technology more practical for use in different research and sporting environments. You will collect movement data from participants performing specific movement assessments and use these data to test and evaluate the developing processing system. Where feasible, participants will include both non-impaired people and para-athletes. The project will investigate the movement measures generated by the system and may also examine early model outputs being developed for Paralympic classification.
What you'll do (100–150 words)	You will collect video-based movement data from participants performing a range of specific movement assessments. Where feasible, participants will include both non-impaired people and para-athletes. You will then analyse the movement data generated by the developing video-processing system. This may include measures such as joint angles, movement trajectories, movement timing and other biomechanical characteristics. You may also investigate early outputs from models being developed for Paralympic classification. The main focus will be evaluating local, on-device processing. You will assess the quality, consistency and usefulness of the movement measures produced when video is processed locally, using the existing cloud-based processing as a benchmark where appropriate. You will use statistical and data-analysis approaches to determine how well the resulting measures perform and what they may tell us about human movement. The exact analyses will be refined based on the data collected and the specific movement assessments used.
What you'll learn (100–150 words)	Students will develop practical experience in: • Planning and conducting human movement data collection with non-impaired participants and para-athletes. • Using video-based technology to collect and analyse human movement data. • Processing, cleaning and visualising biomechanical movement data.



	• Applying statistical methods to evaluate the quality, consistency and usefulness of movement measures. • Comparing movement measures generated using different video-processing approaches. • Interpreting biomechanical data and considering their potential application to Paralympic classification. • Critically evaluating the strengths and limitations of video-based movement assessment. • Communicating biomechanical research findings through scientific figures, written work and oral presentation.
Project outcomes (75–125 words)	Students will be expected to contribute to participant recruitment and data collection and complete a defined analysis of the collected and/or existing movement data. The analysis will evaluate movement measures generated through local video processing, with comparison to cloud-based processing where appropriate. This may include assessing the quality, consistency and agreement of biomechanical measures across processing approaches, and investigating their potential relevance to movement assessment and Paralympic classification. Students will produce a short research report, scientific figures and present their findings at the conclusion of the Summer Research Program.
Who should apply? (75–125 words)	This project would be suitable for students from the Faculty of Health, Medical and Behavioural Sciences, particularly those studying exercise and sport science, exercise physiology, or related disciplines. Students from programs with an interest in human movement, para-sport, biomechanics, data analysis or the use of technology to assess movement are encouraged to apply.
Team & supervision (75–125 words)	Dr Paige Treherne (p.treherne@uq.edu.au) Please contact Paige or Dr Thomas Wackwitz (t.wackwitz@uq.edu.au) if you would like further information. Additional support from Dr Max Andrews, A/Prof. Emma Beckman and Prof. Sean Tweedy.
Additional opportunities (optional)	
Additional requirements (if applicable)	
Contact	Yes, students may contact the supervisor before applying. Direct enquiries to: Paige (p.treherne@uq.edu.au) or Thomas (t.wackwitz@uq.edu.au)