Leighton Wells, PhD

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Applied science and evaluation

Profile

I am an applied sport scientist, researcher and triathlon coach, with twenty years of coaching and a Deakin PhD in Sport Science. My research covers training load, wearable technology and how coaches communicate with athletes. Before sport science became my main work, I spent more than twenty years in technology and commercial roles: technical writing, product management, marketing and running agencies.

I want to help define and evaluate Apple's guidance on exercise and physical activity: writing clear, evidence-based standards for good advice, turning those standards into evaluation criteria and judging model outputs against them. Explaining the evidence matters as much, so that machine learning engineers, data scientists and clinicians can act on it.

Reviewing AI-generated plans

Summit Triathlon Coaching's 24 training plans (345 weeks, 2,704 sessions) start from an AI-generated base, and my advice directs the prescription. I read the model outputs directly and review the generated plans against physiological standards, drawing on my PhD, my coaching experience and peer-reviewed evidence. The first test is whether the training stress is realistic and safe for the athlete's level.

Where a draft had too little recovery, too many build weeks without a lighter week, or a taper that cut too little volume, I corrected the plan. The plans are also groundwork for a study of AI-assisted training, now in scoping.

AI-driven development

The latest AI models write my code, and I check it through adversarial review between models. Python runs through my AI development work, and I understand where it sits in the development chain, how it does its job and why it belongs there. Version control and testing run throughout, and shared code repositories on GitHub are familiar ground.

Written standards

My career began as a Technical Writer at Varian (1998–2000), now part of Agilent, writing manuals and making help videos for UV-Vis spectrophotometers. Later, as Marketing Communications Manager at GBC Scientific Equipment (2000–2002), I managed the staff who produced manuals and help videos for a much wider range of scientific equipment. The Chicago Manual of Style guided my technical writing and marketing communications work.

In my academic work I write assessment rubrics: each rubric sets the performance levels and makes the criteria explicit enough to apply consistently.

Applied coaching

Owner and Head Coach
Summit Triathlon Coaching
2023–present

I coach athletes in Australia and overseas, remotely, across triathlon distances up to Ironman. Twenty years as a coach, more than thirty years in the sport and seven Ironman finishes shape how I coach. Recent results include an athlete's 40-minute personal best at Ironman 70.3 Texas and a masters athlete's third place in the Coolangatta Gold. Athletes returning from injury or illness are regular clients, and return to play has a clinical side.

Activity-based wearables and TrainingPeaks are the core tools of my coaching. I am an AusTriathlon Development Coach and a TrainingPeaks Level 2 Coach.

Research and science translation

Doctoral research

PhD, Sport Science
Deakin University
Completed December 2025
Graduated February 2026

Triathlon Coaching Practices: Optimising Training Load Processes and Communication.

My research examined how training load is quantified in TrainingPeaks, how coaches' practice compares with evidence-based recommendations, and how coaches communicate with athletes, using a dataset of 34,731 training sessions. Triathlon has few coaching practice guidelines, so the research also set out written practical recommendations for coaches. The PhD produced three first-author peer-reviewed papers. My master's research produced a fourth first-author paper, published in 2023.

The training-load study used explicit data-cleaning rules and analysis by age, sex, race-distance preference and training phase. Across the PhD, data collection and processing were my own, as was most of the analysis.

A coaching-education study tested whether a short education intervention changed coach behaviour, drawing on training records, communication activity, athlete surveys, coach ratings and interviews. Coach comments to athletes rose more than fourfold after the intervention, while training adherence showed no significant change over six weeks.

Doctoral thesis

Research practice

As a Deakin Research Assistant in 2023, I tested the energy-expenditure accuracy of GPS sport watches, including sub-maximal VO_2 testing of recreational runners on a clinical-grade treadmill with a MetaLyzer.

As a Deakin Research Assistant since 2025, I recruit participants for a resistance-training and altitude study, teach lifting technique, and run three-repetition-maximum (3RM) strength tests and laboratory protocols. The role also includes mentoring honours students and contributing to the literature and scoping reviews.

Selected translation

In December 2024 I delivered invited coach education for AusTriathlon and TrainingPeaks at the Queensland Academy of Sport, for coaches from development to high-performance and Olympic level. In February 2025 I gave a national AusTriathlon webinar on training load and communication.

I presented my doctoral research at the European College of Sport Science Congress in Rimini in July 2025: 'Long-term, large-scale objective training load data in triathlon reveals differences between training phases and race distance preferences, but not sex or age.' TrainingPeaks then commissioned a practitioner article from me on the 34,731-session study.

Academic practice

I became a Teaching Fellow at Deakin University in 2025, after three years there as a Sessional Academic from 2022. Across eight units, including Exercise Programming, Research Methods and Data Analysis in Exercise and Sport, and Physiology of Sport Performance, I teach exercise physiology, coaching and sport technology. Exercise Programming covers strength and conditioning for older adults, postpartum women and people returning from injury. My teaching has received 100% positive student ratings in six units.

At Victoria University, where I started as a Sessional Academic and Teaching Fellow in 2025, I carried unit-chair responsibility for Sport Coaching Systems and Technology and Sport Physiology, covering assessment, moderation, student support and grade release. In 2025, Sport Coaching Systems and Technology recorded 100% 'strongly agree' on every teaching-evaluation item.

Sport-science and coaching journals regularly invite me to review manuscripts. In 2025 I co-supervised a Master of Applied Sport Science project on the menstrual cycle, symptoms and perceived performance in female triathletes; the student earned a High Distinction and is now doing her PhD.

Publications and commercial experience

Publications

My published work comprises four first-author peer-reviewed papers and a doctoral thesis, with one more paper in review and three in draft.

Wells, L. A., et al. (2026). Training load and intensity in triathlon: objective differences between sex, age, race distance preference and training phase across a cohort of 95 age-group triathletes over six months. Frontiers in Sports and Active Living, 8, 1798702. DOI

Wells, L. A., et al. (2026). An interpretive exploration of Australian triathlon coaching practices: working toward optimal training load practice within real-world contexts. International Sport Coaching Journal, 13(1), 58–69. DOI

Wells, L. A., et al. (2025). Differences between Australian triathlon coaching practices and evidence-based training load management recommendations. International Journal of Sports Science & Coaching, 20(1), 92–101. DOI

Wells, L., Konoval, T., & Bruce, L. (2023). An examination of how and why triathlon coaches use a suite of technologies in their practice. International Journal of Sports Science & Coaching, 18(3), 687–694. DOI

Wells, L. (2026). Triathlon coaching practices: Optimising training load processes and communication [Doctoral thesis, Deakin University]. Repository

Catapult · Crux · Digitalsmith

My marketing consultancy, Crux (2007–2013), created Catapult's original OptimEye and ClearSky identities. I then owned and ran Digitalsmith as Managing Director (2014–2016). Through Crux and then Digitalsmith, from 2012 to 2015, I led digital strategy, website work and acquisition-related due diligence for Catapult, working directly with co-founder and original CEO Shaun Holthouse.

Product and marketing

As Product Manager at ADP Employer Services (2006–2007), I oversaw product development teams and was responsible for Payline, which had a $23 million annual sales target.

As Marketing Director at Dexion (2010–2012), part of GUD Holdings, I led the company's marketing, delivering a new website, new photography of new and existing products, and new print brochures and binders for sales staff. Earlier, I was a Marketing Specialist at OfficeMax (2002–2004) and MYOB (2004–2006).

Leadership and qualifications

Founder and CEO

Pivot Summit
2015–2019

I founded Pivot Summit, a regional technology and innovation event, and secured more than $1 million in sponsorship. In 2017 Pivot Summit brought Apple co-founder Steve Wozniak to regional Australia for the first time. I negotiated Deakin University's major sponsorship with Vice-Chancellor Professor Jane den Hollander AO.

Co-founder, COO and Director

Runway
2016–2017

I co-founded Runway, a startup incubator and accelerator, which raised $1.25 million through the Victorian Government's LaunchVic program.

Career history

Teaching Fellow · Deakin University · 2025–present
Sessional Academic and Teaching Fellow · Victoria University · 2025–present
Research Assistant · Deakin University · 2025–present
Owner and Head Coach · Summit Triathlon Coaching · 2023–present
Research Assistant · Deakin University · 2023
Sessional Academic · Deakin University · 2022–2025
Co-founder, COO and Director · Runway · 2016–2017
Founder and CEO · Pivot Summit · 2015–2019
Managing Director · Digitalsmith · 2014–2016
Marketing Director · Dexion · 2010–2012
Director · Crux Marketing · 2007–2013
Product Manager · ADP Employer Services · 2006–2007
Marketing Specialist · MYOB · 2004–2006
Marketing Specialist · OfficeMax · 2002–2004
Marketing Communications Manager · GBC Scientific Equipment · 2000–2002
Technical Writer · Varian · 1998–2000

Education

PhD, Sport Science · Deakin University · completed 2025, graduated 2026
Master of Applied Sport Science · Deakin University · 2022
Graduate Certificate of International Business · Deakin University · 2000
Graduate Certificate of Computing · Deakin University · 1999
Bachelor of Science (Biology) · Deakin University · 1998

Location

Based in Victoria, Australia, I am open to relocating with my family for the right role.

Google Scholar Deakin Experts ORCID