

- **Professional development**

I am a statistician and data scientist. I continue to expand my knowledge base and skill set. My willingness to undertake further professional development is demonstrated with current study in the fields of: AI, neural networks, machine learning, computer vision, and natural language programming. I am currently undertaking the Deep Learning Course in Coursera.

- **Qualifications**

I was awarded the PhD degree in Statistics in 2015 from the School of Mathematics and Statistics, University of Melbourne. My thesis, entitled Methods for Occupancy, develops innovative modern statistical methods for estimating occupancy under imperfect detection. It develops likelihood methods using a two-stage approach for presence-absence data. Practical applications are broad, such as in ecology, forestry, defence, medicine, and demographics. In general, these methods are applicable to any setting in which presence-absence data exist.

- **Experience**

I have worked in data science, statistical modelling, machine learning, AI, graph analytics, data visualisation, software development, for over 25 years. In this time, I have worked professionally and in academia. I have extensive experience in applying my knowledge in several industries, both academic and non-academic.

Pre-doctorly, as a Statistical Research Assistant at the School of Medicine (University of Crete, Greece); at the Cancer Council of Victoria; in government at the Department of Environment, Land, Water and Planning (DEWLP) (formerly Department of Primary Industries - DPI); as Research Fellow which was a joint post with Deakin University and University of Melbourne. Then, as a PhD candidate a joint position with Parks Victoria.

Since obtaining my PhD, I was a Postdoctoral Researcher at RMIT; a Postdoctoral Research Fellow with the School of Biosciences at University of Melbourne; and as an academic and researcher at the University of Melbourne followed by at La Trobe University. In these roles I also developed innovative statistical methodologies using modern statistical techniques with high-impact outcomes, as outlined below.

- **Research**

As a researcher, I am passionate and motivated by solving real-world high-impact complex problems using my statistical, analytical, and technical knowledge and skills. Solving real-world complex problems has underpinned my career choices. My research interest is in theoretical methods which have practical real-world applications. Hence collaborations from several academic and non-academic research partners are particularly appealing to me. As a result, my work has been founded in multidisciplinary collaborations with government and industry bodies, research institutes and universities. The output of my work has had direct high-impact, methodological, commercial, and practical real-world outputs. These include the fields of causal inference. These are evidenced in my publication list.

My success in research is demonstrated with more than twenty top-tier international peer-reviewed scientific journal and book chapter publications, presentations at prestigious conferences, invited speaker seminars and presentations to prestigious universities, and professional workshops, across industry and academia. Topics varied across theoretical statistical methodology and its applications. I have developed new innovative statistical methodology as demonstrated in my extensive publication list.

- **Leadership & Achievements**

I am experienced and successful in leadership in a variety of contexts, including, consulting and research on high-impact projects, conferences, and teaching. I influence across business without direct report line authority. I work independently and autonomously, with little to no supervision.

I am a go-getter, I create new collaborations and opportunities with seeing things through to fruition and successful completion, and, generally, I make things happen. There are many examples throughout my career.

Pre-doctorly, I have ten years' experience as consultant, engaging with professional and industry bodies and stakeholders to foster collaborative partnerships.

Following, is a selection of examples of high-impact projects I was project lead and Chief Statistician. In a professional setting at DPI (DELWP), I was the Chief Statistician for Australian Biosecurity for which I conducted a risk analysis, reviewed, and updated risk analysis methods for estimating risk of importation of apples from New Zealand into Australia. This directly informed importation trade and best practice policies between Australia and New Zealand, for several products including pig importation.

In another example, researching practices in finding Alternatives to methyl bromide use for pesticides. This was a joint project with the European bodies TEAP and UNEP, and the Australian government, whilst I was at DPI (now DELWP). I was co-project leader for the Australian team. In another international trade project with China, my work informed the extension of the shelf-life of pak-choy storage.

My research on microbial risk assessment directly changed the method for estimating risk of infection in water re-use practices in developing countries, as published in the WHO guidelines. While at the Cancer Council of Victoria, all projects I worked on were collaborative and with direct public health outcomes. For example, my work on the Melbourne Collaborative Cohort Study (MCCS) a 20-year study, writing a program for nutrient analysis for commercial use, and analysing the cancer registry data, all with direct public health policy outcomes.

Most recently is collaboration with Harvard University. I organised a joint seminar with Ann Poduri during her stay in Melbourne, I was invited to visit here and her lab in the US, where she personally hosted me. I was invited to give seminars to her research lab during my stay in the US, I worked with medical researchers and gave them statistical consultation advice on their statistical design and analyses, during my stay. As a result of this research, I was a finalist for a Fulbright Research Fellow Scholarship (2019) and was a DECRA candidate (2019-2020).

In an academic research setting, I designed, organised and co-chaired, a 3-day conference for over 100 delegates, plus keynote speakers (Research School on Statistics and Data Science (RSSDS), La Trobe University, 2019). We received many compliments for the running of the conference, and during the planning phase, my detailed forward planning was particularly appreciated by my peers. Proceedings of the conference were published in Springer, for which I was an editor and reviewer. I am experienced in leading teams of teaching staff as lecturer and co-ordinator of tertiary undergraduate and postgraduate courses that delivered successful business and student outcomes.

- **Publications**

I have over twenty peer-reviewed journal and book chapter publications, numerous conference presentations, invited speaker seminars and presentations, and workshops across industry and academia.

For many of these, I have led the project and the team of collaborators. For example, as a Post-doctoral Research Fellow on the project Score test publication, I lead the research, I was first author on the publication, worked independently and autonomously, and project managed the other co-authors. I presented my work at the Ecological Conference (St Andrews, 2018). Other examples of independent research and managing collaborators includes the research into childhood epilepsy, a collaboration with Harvard University. An outcome of this collaboration I was a finalist as a Fulbright Scholar (2019). As well, academic travel to the US for this research, fully funded by La Trobe University academic travel grant (2019).

- **Big-Data**

I have extensive experience working with large-scale data (big-data). At the CCV, I worked with the Victorian Cancer registry data, extracting, data cleaning, manipulating, and modelling and analysis. In addition, working with the large-scale longitudinal Melbourne Collaborative Cohort Study data. More recently, I have experience with geospatial data, and large biological data, and high experimental throughput data. Including manipulating data for research from specialist gene data software CRISP-R.

As a statistician and epidemiologist at the Cancer Council of Victoria (CCV) (Australia), I was involved in the design and analysis of large-scale longitudinal observational studies and surveys. Namely, the Melbourne Collaborative Cohort Study (20-year follow-up study), investigating relationships between diet and cancer, and other diseases such as diabetes and cardiovascular disease. This was a joint study with the School of Global and Population Health, University of Melbourne.

- **Professional Roles and Academic Travel**

Among other responsibilities, I was statistical (epidemiological) consultant to the departments within the CCV, advising on their research needs in all areas of cancer-related statistics and epidemiology. I was responsible for producing cancer survival rates using the data from the Victorian Cancer Registry as maintained by the CCV.

During my employment at the Department of Primary Industries (DPI) (Victoria, Australia) as a statistician (biometrician), I was a specialist in the design and analysis of complex experiments. I was a state-wide statistical consultant to agricultural and food scientists at DPI as well as external stakeholders. I worked on high-impact national and international projects with industry and government stakeholders (major projects outlined in my CV).

In 2019, I was an invited academic to travel to the Boston Children's Hospital Research Lab and Department of Neuroscience at Harvard in the US. I visited the wet-lab to consult on the experimental design and analysis of their big-data zebrafish larval studies for new precision medicines to treat childhood epilepsy. As a result, I was a Fulbright finalist for my research proposal into designing and modelling zebrafish studies with high-throughput data for precision medicine for childhood epilepsy. Output from my research on investigating, analysing, and modelling the high-throughput data, were research seminars, and invited speaker presentations at La Trobe University and the Boston Children's Hospital Research Lab. My knowledge and years of experience in experimental design and cohort studies were invaluable to this research topic.

- **Software**

With over 20 years' experience as a programmer, software developer and software educator, I am an expert programmer in several languages and operating systems, including Microsoft, Mac and Linux operating systems. My success as a software developer and programmer in industry, in

academic research and in education is evidenced with writing software for commercial use, and for scientific research.

During my employment in cancer research at the CCV, I became an expert programmer in Stata, beginning with professional training in the Stata programming language. Stata-related programming achievements include software development for commercial use of scientific methods. As well as designing and analysing large-scale scientific observational and survey studies. At the CCV, I also used S-plus, SPSS, GLIM and C++.

At DPI, I programmed, designed, and analysed complex experiments mainly in Genstat. Early on in my research career I used Excel add-on modules such as @Risk.

Since then, I am a software developer in the R-language for my research and teaching. I have developed R software based on my innovative research methods that led to peer-reviewed scientific journal publications, invited presentations, conference presentations, academic and non-academic workshops. I have been teaching R and programming to tertiary students for over a decade.

- **Financial management**

I have been successful at winning commercial and government contracts, and research grants. These involved managing the budgets. For example, a research commercial grant with Parks Victoria (Victorian Government, Australia) for my PhD, as a contract Research Fellow with the University of Melbourne, as a contract Postdoctoral Research Fellow, and a contractor for the Australian Government for Biosecurity research. Furthermore, I was a Fulbright Scholar Research finalist (2019), where my research proposal was also accepted to the La Trobe University program for the Australian Early Career Research Grant (DECRA) (2019). In 2016, I was awarded the Early Researcher Establishment Grant, at the School of Mathematics and Statistics, University of Melbourne, Australia. I have been awarded academic grants to work with my collaborators, including a joint La Trobe University and AFRAN grant for travel to the Boston Children's Hospital Research Lab and Harvard University Department of Neuroscience, and the School of Mathematical Sciences. During these travels, I went to the MISTIS research centre at the INRIA research institute (France).

- **Supervision**

My ability and enthusiasm to supervise research project work is demonstrated in successful student research outcomes. As co-supervisor for PhD student, and as sole supervisor to Honours Bachelor students for research projects as part of the AMSI Summer Scholar program. Under my direct guidance, one of these Honours students was accepted into the PhD program at University of Melbourne. Extensive years of experience as supervisor and consultant in a professional setting, together with my teaching experience both in academia and professional environments, have directly contributed to my continued success and enthusiasm in supervising research students.

- **Collaborations**

I have demonstrated success in interdisciplinary collaboration. These range to several research areas, such as ecology, agriculture, epidemiology and medical statistics, population health, cancer research, and neuroscience. In addition to academic collaborations, I have extensive experience in collaborating with national and international industry stakeholders, government departments and with research institutions.

Overall, I am enthusiastic for both academic and industry/professional collaborations. My willingness and success are demonstrated with peer-reviewed publications, policy influence, and industry and research practices influence.

For example, with the Boston Children's Hospital and the Department of Neuroscience at Harvard University, University of Kent, Mistis research lab at INRIA research institute, France. Here in Australia with various departments at the University of Melbourne, RMIT and La Trobe University, and Parks Victoria. In government, at the Department of Primary Industries of Victoria, I worked with all the departmental locations around the state. I would often travel to these locations or work together on collaborations remotely. These projects included overseas stakeholders, such as teams on free-trade projects with China, and on other projects with TEAP and UNEP in Europe.

These collaborations have resulted in peer-reviewed scientific publications, invited academic travels, invited presentations, and delivery of workshops. Moreover, these have resulted in changes to government trade policy and practices, and to changes in national and world health policies and practices.

- **Interpersonal and Communication**

I have excellent interpersonal and communication skills, at both written and verbal communication, for audiences with technical and non-technical backgrounds. As an educator and consultant with more than 25 years of experience, I am effective at communicating complex scientific methods and concepts to a variety of technical and non-technical audiences. My extensive peer-reviewed publications list is evidence of this. As well, I am experienced in commercial software development and documentation.

- **Time management**

I am effective at managing my time and balancing multiple, and complex, projects to appropriately prioritise workloads to meet strict deadlines. I am accustomed to working under high pressure by balancing competing project priorities and timelines to achieve successful results. These skills are evidenced in my achievements working on major government, international, and industry projects, publications in top-tier international scientific journals, and successful delivery of high impact projects, tertiary courses, and for research grants. These projects are discussed here and highlighted in my CV.

- **Teamwork**

I am interested and successful in building a cohesive and effective team in whatever context I am working.

My ability to work independently and within teams is demonstrated in my successes as a professional, a researcher and an educator. As a collaborator and with extensive experience working in teams, and autonomously, I am dependable to deliver my part of a project, or when project leader to deliver successful outcomes within deadlines. I defer to other experts for their contributions to a project as the need arises. I consider alternatives by listening and communication, resetting goals and expectations, and being adaptable as required to new parameters and circumstances as they may arise. In this way, I identify effective long-term solutions to complex scientific, business, and practical problems. Success are evidence in my extensive publication list, and successful industry project outcomes.

- **Networking**

I am skilled and practised at networking and maintaining relevant contacts. Within the research arena, I have maintained contact with colleagues with whom I have shared interests, e.g. I kept sufficient communication with researchers I met at a conference that I was able to invite them to a seminar of shared interest when they were visiting my institution and subsequently was invited to visit their institutions. I have also been able to link my contacts to each other where their work is related, to the benefit of those concerned e.g. a student of mine was accepted into the PhD program at The University of Melbourne after my introduction and recommendation.

- **Teaching**

My experience in teaching at major universities and institutions spans three decades. I have worked in these capacities both in Australia, and overseas (Greece). As a native bilingual speaker, I can work professionally in both languages.

As an enthusiastic, patient, and supportive educator, I teach by motivating, engaging and inspiring students to learn. Teaching methods include lectures, tutorials, seminars, workshops, and computer software classes with a variety of software, for the past ten years mainly in R. I am well versed at blended learning as well as traditional lecture-style teaching.

I have designed and developed undergraduate, postgraduate, and professional courses. I have extensive experience in teaching diverse student cohorts, across a range of disciplines and knowledge base. Furthermore, my consulting experience has enhanced my teaching and communication skills. I have taught statistics to diverse professional audiences, for example, statisticians, agricultural scientists, medical workers, and research workers from universities, government, and other institutions. This required versatility in adapting language and level of technical content appropriate to the audience.

My teaching experience at the tertiary level includes probability and statistics. For example, courses for mathematics and statistics majors, as well as interdisciplinary statistics courses that served students university-wide in other faculties. Examples of these included tailored courses designed for the School of Biomedicine, School of Environment, School of Biosciences, School of Engineering, and for research professionals, facilitated by the Statistical Consulting Centre. As course coordinator, I had full academic and administrative responsibilities. This entailed developing and maintaining the online course learning platform and overseeing and managing a team of teaching assistants.

My excellent teaching track record is evidenced in student retention rates and achieving honours pass-rates in my courses, as well as personal tributes from students, expressing their gratitude and for inspiring female students in STEM. This has directly contributed to their success in their endeavours, as professionals and as researchers. Official student feedback and teaching scores further support my success as educator.

- **Administration, Organisational Roles, Outreach and Academic Service**

Administrative and organisational roles and responsibilities have been at the core in my professional, academic, and professional positions. For example, as international tertiary student assessor and examiner, university open day organiser and representative (La Trobe University). As academic course reviewer and on course development committees, tertiary career advisor, and conference organising committees. University outreach programs include as ambassador for maths and science career pathways for secondary students in STEM, with my first appearance by invitation in 2002 as representative in a Statistics career at the Cancer Council of Victoria in the School of Mathematics and Statistics. Since then, I have officially represented universities in my academic positions. I was appointed ambassador to develop and lead a campaign to India for La

Trobe University's Undergraduate and Postgraduate Mathematical Sciences Degrees (2020). This did not proceed due to COVID.

I have served on several academic committees and have held several organisational roles. These include a member of the gender equity committee at the University of Melbourne, and member of the mathematics and statistics school academic women support committee. As well, I have served as reviewer and technical editor on several scientific peer-reviewed journals. These include, serving as reviewer of scientific peer-reviewed journals, in health and medical journals, since 2018. As well as technical editor for the Australian and New Zealand Journal of Statistics (ANZJS).