



The Centre for AI and Digital Ethics

Annual Report 2020

Launching a cross-disciplinary research centre

A note from the Co-Directors

It is difficult to know quite what to say in reflecting back on year in which we launched a centre precisely at the outset of the COVID-19 pandemic. This obviously required us to pivot our strategy for the first year of CAIDE. Of course, everyone experienced a tough 2020 and some experienced unimaginable hardship, which makes our hurdles look minor in comparison.

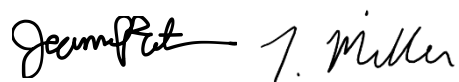
However, without wanting to trivialise the experience for many, the circumstances of 2020 also provided new opportunities. At CAIDE, we were able to use technology to establish connections and run events that perhaps would not have worked so well in the past. **We found that the community of those interested in AI and digital ethics were open, engaged, and generous with their time.** We strove to showcase genuinely cross-disciplinary perspectives on important issues around emerging technology.

The aim of CAIDE is to lead conversations, policy, teaching and research around AI and digital ethics. For this, our primary aim in our first year was to grow our network. Despite the pandemic, we feel this process has begun in earnest. We look forward to consolidating these connections and building new ones in 2021.

We extend our thanks to everyone mentioned in this report. We express particular gratitude to Adam Lidders and Gabby Bush. Without their complimentary, and extraordinarily broad skill set and endless enthusiasm, the operation and impact of CAIDE would not have been possible. We also thank The University of Melbourne and our member faculties for supporting us in what we think is an important and forward-looking endeavour.

We welcome discussions and questions regarding this report and our ongoing work, do not hesitate to reach out.

Warm wishes,

Handwritten signatures of Jeannie Paterson and Tim Miller in black ink.

Jeannie Paterson and Tim Miller,

Co-Directors

Centre for AI and Digital Ethics

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A year in numbers:



Please see Appendix for further details.

Vision and Mission

The **vision** for CAIDE is to encourage and promote **cross-disciplinary research, teaching and leadership** in the fields of AI and Digital Ethics at the University of Melbourne. Its purpose is to **promote fair, transparent and accountable** introduction, use and evaluation of existing and emerging AI, automation and digital technologies. Its aim is to ensure that **government, business and other organisations** are held to high standards of **ethics and equity** in their use of new digital and AI technologies and that UoM graduates and the community have the **insight, knowledge and expertise** to engage with these issues.

Mission: CAIDE will conduct **interdisciplinary research projects** and **teaching, lead public engagement and debate, support cross-disciplinary PhD Students and post-doctoral fellows**, and develop a network of **high-level national and international partners**. It will do this via its **research outputs, government submissions, seed funding scheme, development of new subjects and holding targeted and impactful events**.

STRATEGIC AREA: Cross-Disciplinary Research

Cross-disciplinary research is the cornerstone of our work, so in the first year we invested in building our research portfolio and growing our research connections. In 2020 we established five cross-disciplinary research projects with internal, national and international partners.

Our cross-disciplinary research projects:

- CAIDE brokered a project bringing together researchers from Computing and Information Systems and the Faculty of Arts to work on a project on **AI and gender bias** with funding from Unibank.
- ‘The **Ethics** and Practice of **AI Localism** at a time of COVID19 and beyond’ with the Institute for Ethics in Artificial Intelligence (IEAI) at the Technical University of Munich and the GovLab at New York University. Funding from the IEAI Collaborative Fund.
- ‘From Pockets to Cockpits: The **Cultural Context** of Digital Flight Assistants’ with researchers from the Faculty of Arts and Melbourne School of Engineering, funded by the CAIDE Seed funding round.
- ‘Regulatory mechanisms for protecting reasonable expectations of **privacy**: the role of **consent and fairness** in Australian and Indian **Data Protection Law**’ with researchers from Jindal Global University, India. This project was funded by **UoM India Engagement Seed Grant (IESG) 2020**.
- ‘Beyond Anthropomorphism? The **AI – Machine – Human – Animal** continuum’ with researchers from the Digital Society Initiative, University of Zurich. This project is jointly funded by CAIDE and University of Zurich.

Please see research details and researchers in Appendix.

These research projects address themes outlined in our mission statement – covering topics of **ethics, bias, privacy, consent, fairness** with the **cultural context** and **understanding** that create **insight, knowledge and expertise** for our researchers, students and broader community.

11 Publications

The CAIDE team, including the Senior Research Fellows in Digital Ethics, have published 11 articles in relevant peer-reviewed academic venues on the topics of COVID-19 tracing technologies, consumer privacy, explainable AI, the ethics of violence against animals in video games and xenobots.

STRATEGIC AREA: Teaching

Teaching is integral to the development and deployment of fair, safe and transparent AI and digital technologies. CAIDE is committed to ensuring that the next generation of developers, legislators, researchers and practitioners have learnt the principles, challenges and thinking necessary for ethical AI and digital technologies.

To ensure this is achieved CAIDE has developed a broad teaching portfolio that includes undergraduate and postgraduate subjects at the University of Melbourne. The subjects run across our four member faculties and will continue to be developed and strengthened as our research provides further thinking and case studies in the area.

AI, Ethics and the Law was our primary teaching offering in 2020. The subject was taught at undergraduate breadth level with **168 students** from across Science, Arts and Biomed. The subject was delivered by Co-Director Jeannie Paterson with support from Senior Research Fellows' in Digital Ethics, Marc Cheong, Simon Coghlan and Kobi Liens. Each week we had guest speakers for specialist areas which included **tech developers, legal professionals, disability support and advocacy specialists** as well as CAIDE affiliate researchers from across the University of Melbourne.

Our Tutors for AI, Ethics and the Law were PhD Students from across our member faculties. They worked closely with our students and with Jeannie to ensure the smooth running of the subject's first delivery.

Top left – Henrietta Lyons, *School of Computing and Information Systems*.

Top Right – Debbie Gonzalez Canada, *School of Ecosystem and Forest Sciences*.

Bottom Left – Vivi Tan, *Melbourne Law School*.

Bottom Right – Susan Sheldrick, *School of Computing and Information Systems*.



STRATEGIC AREA: Network and Collaboration

As demonstrated through our growing research and teaching portfolio, CAIDE has aimed to create strategic, meaningful and robust partnerships with internal, external, national and international partners. We have been able to achieve this through reaching out to colleagues and experts in the field, working on joint projects with researchers from across the University and collaborating on events, panels and publications.

We have been expanding our collaboration and engagement with **government** counterparts through events – such as the seminar ‘On Fairness and Explainability: Interactions between computer science and social science,’ which was part of the Victorian Government’s Digital Innovation Futures Festival, and through government policy submissions.

Please see Appendix for further details.

CAIDE Summer Research Academy

Starting in November 2020, CAIDE held their first Summer Research Academy with **33 cross-disciplinary PhD students and post-doctoral fellows**. These students were from the University of Melbourne, other Australian Universities and Universities in Italy and the UK.

The students came from various disciplines including **law, computer science, culture and communications, political and social sciences, criminology, business, ecosystem and forest sciences, human geography, philosophy, history and international relations**.

Many of these students have written for our blog, worked as tutors in our breadth subject and will continue to work with us into 2021 and beyond.

Our National, International and Government Partners:

- Office for the Victorian Information Commissioner (OVIC)
- The Institute for Ethics in Artificial Intelligence (IEAI), Technical University of Munich
- Jindal Global University
- GovLab, New York University
- Telstra
- Victoria Government’s Digital Innovation Futures Festival
- Digital Society Initiative, University of Zurich
- Humanizing-Machine Intelligence (HMI), Australia National University
- Ian Potter Gallery
- Science Gallery
- Melbourne Social Equity Institute
- Digital Studio
- Complex Human Data Hub
- Melbourne Connect
- Melbourne Centre for Data Science
- Centre for Future Intelligence, University of Cambridge

STRATEGIC AREA: Service and Leadership

A goal of CAIDE is to show service and leadership by informing debate around ethical AI. To this end, we have run high-profile public events, participated in government inquiries and served on the steering committees of other organisations. We have further sought to continuously build the profile of CAIDE and the work of AI and Digital Ethics at the University of Melbourne.



The CAIDE team have done this through multiple activities which include:

- A series of events hosted by CAIDE such as *The Fake News Pub Lunch* (above).
- Creating videos as explainers or to discuss lighter subjects like their favourite AI or technology related [TV show, movie or piece of literature](#) to showcase the work of CAIDE to a wider audience and as advertising for our AI, Ethics and the Law subject.
- A broad list of speaking engagements on panels, in lectures and as keynote speakers for our partners, stakeholders and interest groups.
- CAIDE has written widely in the media and in short form publications. We have written extensively for The University of Melbourne’s Pursuit Platform, including pieces about COVID tracing technologies and surveillance, digital equity, advertising, news and guidelines on Social Media.
- The CAIDE team are active on Twitter, LinkedIn and Facebook where we have watched our followers and engagement grow over the year.

The 2020 CAIDE Team

Co-Director, Prof Jeannie Paterson (Melbourne Law School)

Jeannie specialises in the areas of contracts, consumer rights and consumer credit law, as well as the role of new technologies in these fields. Her research covers three interrelated themes: support for vulnerable and disadvantaged consumers, the ethics and regulation of new technologies in consumer markets, regulatory design for protecting consumer rights and promoting fair, safe and accountable AI.

Co-Director, Prof Tim Miller (School of Computing and Information Systems)

Tim's primary area of expertise is in artificial intelligence, with particular emphasis on Human-AI interaction and collaboration, Explainable Artificial Intelligence (XAI), decision making in complex, multi-agent environments and reasoning about action and knowledge. Tim's work is at the intersection of artificial intelligence, interaction design, and cognitive science/psychology.

Academic and Research Programs Manager, Adam Ladders

Adam joined the Centre from the Victorian Department of Premier and Cabinet where he was working on data policy, strategy and ethical analytics. Previously he was Executive Officer of the University's Networked Society Institute. Adam has postgraduate qualifications in Law and Public Policy.

Project Officer, Gabby Bush

Gabby is responsible for coordination of daily activities, events, outreach and engagement for CAIDE, and has also authored several Pursuit pieces. Gabby joined the centre from Canberra, where she worked on partnerships and engagement, with a focus on technology projects for consulting firm ThinkPlace. Prior to that Gabby ran the eGovernance and Digitisation project for UNDP Samoa. Gabby has postgraduate qualifications in International Development and Religious Studies.

Senior Research Fellows in Digital Ethics, School of Computing and Information Systems Supervised by Reeva Lederman

Professor Reeva Lederman

Reeva is a Professor in the School of Computing and Information Systems at The University of Melbourne and has been a faculty member since 2000. She leads the Digital Ethics group in CIS and the research area "People and Information." She is an active member of the International Health Information Systems research community.

Dr Simon Coghlan

Simon is a moral philosopher and a veterinarian. His research currently includes a focus on companion and care robots for older people and other groups on animal-computer interaction, and on digital technologies in healthcare and public health. He has interests in applied ethics of various types, including conservation ethics, animal ethics, and health ethics.

Dr Marc Cheong

Marc is interested in the intersection of technology (big data, social media, etc.) and philosophy (existentialism, ethics, epistemology, and Experimental Philosophy). He has a strong background in data science and social media analysis and is one of the early pioneers in Twitter research, having completed his PhD on 'Inferring Social Behavior and Interaction on Twitter by Combining Metadata about Users & Messages'.

Dr Kobi Leins

Kobi submitted her PhD with the University of Melbourne on whether the use of nanotechnology-enhanced or based weapons is prohibited or limited in an armed conflict. She is currently conducting research on the impact of legislation on individuals, particularly in relation to Australian laws governing cyber. In her pre-academic life, Kobi managed programs and teams in the areas of administrative law & justice, humanitarian law, human rights law, and disarmament with the United Nations and the International Committee of the Red Cross.

Graduate Researchers

Three graduate researchers are conducting work closely aligned to the Centre.

- **Henrietta Lyons**, School of Computing and Information Systems – *Developing human centred explanations for decisions made using AI.*
- **Vivi Tan**, Melbourne Law School – *Online Dispute Resolution and Consumer Disputes in Australia.*
- **Debbie Gonzalez Canada**, Faculty of Science - *Digital technologies shaping social experiences and practices of environmental monitoring participants.*

CAIDE PhD Scholarships

CAIDE granted two strategic cross-disciplinary PhD Scholarships in 2020.

- **Sheilla Njoto**, School of Social and Political Sciences / School of Computing and Information Systems.
- **Elisa Shioji** – *has deferred her PhD until borders have reopened.*

Steering Committee

The CAIDE Steering Committee supports the work of the Co-Directors in developing CAIDE's research agenda and collaboration. Members of the Steering Committee are drawn from CAIDE's member faculties.

- **Prof Howard Bondell**, Centre for Data Science, Faculty of Science
- **Prof Reeva Lederman**, Computing and Information Systems, Melbourne School of Engineering
- **Prof Greg Restall**, Historical and Philosophical Studies, Faculty of Arts
- **Prof Liz Sonnenberg**, Pro Vice-Chancellor (Digital and Data), PVC (Research Infrastructure and Systems)
- **A/Prof Mark Taylor**, Melbourne Law School

Associates

We are building a community of researchers at the University of Melbourne who are interested in the issues of AI and Digital Ethics. Referred to as the 'CAIDE Community,' our associates are actively involved in conducting research, participating or speaking at our events, collaborating on grants or teaching, as well as supporting and promoting CAIDE throughout the University of Melbourne and beyond.

- **Dr Tatiana Cutts**, Melbourne Law School
- **Dr Matthew Dolan**, Faculty of Science
- **Dr Inbar Levy**, Melbourne Law School
- **A/Prof Jonathan Liberman**, Melbourne Law School
- **Dr Fabio Mattioli**, Faculty of Arts
- **Dr James Parker**, Melbourne Law School
- **Prof Megan Richardson**, Melbourne Law School
- **A/Prof Stacey Steele**, Melbourne Law School
- **A/Prof Leah Ruppamnear**, Policy Lab
- **Professor Ben Rubinstein**, School of Computing and Information Systems
- **Dr Niels Wouters**, Science Gallery
- **A/Prof Jason Bosland**, Melbourne Law School
- **Prof Rachel Fensham**, Digital Studio Faculty of Arts
- **Dr Jake Goldenfein**, Melbourne Law School
- **Dr Piers Gooding**, Melbourne Social Equity Institute
- **Dr Lea Frermann**, School of Computing and Information Systems
- **Prof Tony Wirth**, School of Computing and Information Systems

Appendix

1 Research Academy

The CAIDE Summer Research Academy was held from 5 November 2020 until 12 February 2021. Sessions ran online and consisted of group discussions, seminars, panels, break out rooms and trivia.

Metrics

33 students total

Universities:

- 25 Unimelb Students
- 8 external students

Location:

- 31 Domestic
- 2 International (Italy and UK)

Faculty:

- 7 Computer Science
- 7 Law
- 3 Science (Inc Ecosystem and Forest Science, Human Geography, MDAP)
- 16 Arts (Inc. Philosophy, Regulation and Global Government, Media and Communications, Criminology, Social and Political Science)

1 Seed Funding Award

‘From Pockets to Cockpits: The Cultural Context of Digital Flight Assistants’

The project aims to identify pilots’ attitudes towards personal digital assistants to develop a preliminary dataset on the cultural anxieties generated by AI in aviation. Currently, the communication between pilots and planes’ automated systems remains mediated by a myriad of small screens, levers and switches which encourage pilots to disengage when not actively flying. These interfaces amplify the cognitive dissonance between humans and the planes’ autonomous systems, making it challenging to regain awareness and take control during emergencies that occur after periods of inactivity. The project will work directly with pilots to understand the challenges faced by pilots as AI becomes increasingly important in aviation.

The project is led by Dr Fabio Mattioli from the School of Social and Political Sciences with:

- Dr Fraser Allison, Research Fellow – The Future Cemetery, FEIT
- Dr Harriette Richards, Honorary (Fellow), School of Culture and Communication, Arts
- Dr Johanne Trippas, Doreen Thomas Postdoctoral Fellow, FEIT
- Sarah Gosper, PhD Candidate, Arts
- Cynthia Sear, PhD Candidate, Arts
- Sara Khorasani, PhD Candidate, FEIT

1 Breadth Track

AI and the Law Breadth Track:

The Breadth Track is designed to give undergraduates at the University of Melbourne the skills necessary to deal with the technical, ethical and legal challenges that arise in designing, governing and regulating AI that is fair, safe and beneficial to society.

AI and the Law Breadth Track			
AI, Ethics and the Law	LAWS10009	Jeannie Paterson	jeanniep@unimelb.edu.au
Regulating Digital Platforms	BLAW20002	Jake Goldenfien	jakeg@unimelb.edu.au
Foundations of Computing OR Media Computation	COMP10001 COMP10003	Tim Miller	tmiller@unimelb.edu.au
Technology and Contemporary Life	HPSC20009	Michael Arnold	mvarnold@unimelb.edu.au
Diplomat, Soldier, Spy: The Deep State	ANTH20013	Fabio Mattioli	fabio.mattiolo@unimelb.edu.au

1 Teaching Grant

Developing tools to demonstrate bias in algorithms for AI, Ethics and the Law Students

Learning and Teaching Initiative, University of Melbourne

CAIDE was given \$20,000 to develop experimental learning tools for students in our subjects. The tools include python notebooks that demonstrate how bias works in code for students that are not studying computer science and graphic scribe videos that explain neural networks and blockchain.

2 PhD Scholarships

CAIDE granted two strategic cross-disciplinary PhDs in 2020

Sheilla Njoto, School of Social and Political Sciences / School of Computing and Information Systems. Sheilla's PhD research will be on 'Gendered algorithms: the future as a replica of the discriminative past.' She will be supervised by Associate Professor Leah Ruppanner in the School of Social and Political Sciences, Dr Marc Cheong and Dr Lea Frermann from the School of Computing and Information Systems

Elisa Shioji – has deferred her PhD until borders have reopened.

3 Government Policy Submissions

CAIDE made submissions to three Commonwealth Government inquiries. These submissions were developed in consultation with our community of CAIDE connected researchers. We were assisted in preparing the submissions by the sage advice from Kelly Farrow, Adviser, Policy and Government Relations at The University of Melbourne and colleagues at Melbourne Law School and the School of Computing and Information Systems.

The following submissions were made:

- AI Action Plan, led by Adam Lidders
- Privacy Act Review Issues Paper, led by Adam Lidders
- Mapping Australia's AI and Autonomous Systems Capabilities, led by Gabby Bush.

4 New Subjects

- **AI, Ethics and the Law (LAWS10009)**, Semester 2 2020.
Subject Coordinator: Jeannie Paterson
- **Legal Research Stream on AI Regulation**, Semester 2 2020.
Subject Coordinator: Jeannie Paterson
- **Computing and Information Systems Subject - The Ethics of AI**, Semester 1, 2021
Subject Coordinator: Tim Miller
- **Professional Science Master's Subject – Digital Ethics for Scientists**, Semester 2, 2021
Subject Coordinator: Previously Adam Lidders

4 Media Mentions

- Matt Johnston, '[Melbourne Uni's new AI and digital ethics centre already concerned about COVID-19 responses](#)' *IT News* (7 April 2020).
- Dr Alan Finkle '[AI on my device, not in the cloud.](#)' *The Australian* (online edition) (8 May 2020).
- Excerpts from an interview with Tim Miller were included in Gizmodo's piece '[Apps Can Charge You More Based on Sex and Location, and Legislation Can't Keep Up](#)' (28 August 2020).
- Chief Scientist Dr Alan Finkel, in [a speech reflecting on his tenure as chief scientist](#), discussed AI and the need to ensure ethical principles for a fairer society and used [his speech for the launch of CAIDE](#) as an example of an important contribution of AI Ethics in Australia (18 August 2020).

4 Conference Presentations

- Marc Cheong and Kobi Leins presented at the Automated Government and Public Law online workshop, co-hosted by the Gilbert + Tobin Centre of Public Law and the Allens Hub for Technology, Law & Innovation on 'Modernising and Review of Automated Australian Administrative Decision-making' (10 August 2020).
- Simon Coghlan and Jeannie Paterson presented on their paper '[Virtue and Vice in the Design and Deployment of Digital Technologies for Education](#),' for the Birmingham Centre for Character and Virtue, (December 2020).
- Adam Ladders and Jeannie Paterson presented insights from their research paper on equity, ethics and governance in contact tracing apps at the NY Future of Privacy Forum's [Privacy and Pandemics Workshop](#) on 27 and 28 Oct.
- Jeannie Paterson and Elise Bant, 'Automated Mistakes' Obligations Conference, University of Western Australia, 6 Dec 2020.

4 New Research Projects

Research Project	Funder	Project Partners	CAIDE Researchers
AI and Gender Bias	Unibank \$50,000	Unibank	Prof Leah Ruppner Dr Marc Cheong Sheila Njoto
The Ethics and Practice of AI Localism at a time of COVID19 and Beyond	IEAI collaborative funding	Institute for Ethics in Artificial Intelligence (IEAI) at the Technical University of Munich and the GovLab at New York University.	Prof Jeannie Paterson Adam Ladders
Regulatory Mechanisms for Protecting Reasonable Expectations of Privacy: the Role of Consent and Fairness in Australian and Indian Data Protection Law.	UoM India Engagement Seed Grant (IESG) 2020	Jindal Global University	Prof Jeannie Paterson Prof Mark Taylor
Beyond Anthropomorphism? The AI-Machine-Human-Animal Continuum	CAIDE and University of Zurich	Digital Society Initiative, University of Zurich	Dr Fabio Mattioli Dr Simon Coghlan Dr Martin Tomko

5 Public Events

- **A Pub Lunch with CAIDE: Digital Intermediaries** with Professor Karin Verspoor (MLS) and Dr James Parker (MLS).
- **'On Fairness and Explainability: Interactions between computer science and social science'** by Professor Suresh Venkatasubramanian from the University of Utah.
- **The Fake News Pub Lunch** co-hosted with Digital Studio, with Dr Fabio Mattioli (Arts), Dr Marc Cheong (CIS) and Professor Rachel Fensham (Arts).
- **Researcher to Researcher Speed Dating** with the Digital Society Initiative at the University of Zurich.
- **'Data Science and the Need for Collective Law and Ethics'** co-hosted by HMI (ANU) with Dr Jake Goldenfiel (MLS,) Dr Seb Benthal (NYU,) Associate Professor Tatiana Cutts (MLS,) and Professor Seth Lazar.

10 Radio and Podcast Appearances

- Megan Richardson and Jeannie Paterson interview, [Privacy, Pandemics and Digital Assistants](#), *New Daily's Covid Conversation Podcast* (23 May 2020).
- Kobi Leins, ['Max Headroom: How Surveillance Capitalism Works'](#) *RRR* (16 April 2020).
- Kobi Leins radio discussion about ['AI: It's time for the law to respond'](#) on *Byte Into It*, *RRR* (1 April 2020).
- Kobi Leins interview, 'COVIDSafe App', *Sky News TV* (27 April 2020).
- Marc Cheong interview, 'COVIDSafe App' *Triple M* (27 April 2020).
- Jeannie Paterson, Jason Bosland and Alison Duxbury, ['COVIDSafe – is Big Brother on Your Phone?'](#), live discussion hosted by Jon Faine at *ABC Melbourne* as part of the Melbourne Law School's ['Germs and Justice'](#) series (9 June 2020).
- Kobi Leins, ['Claims Government Told Apple to Block Rival Apps'](#) *ABC National Radio* (18 June 2020).
- Tim Miller and Jeannie Paterson, ['Eliiza AI Australia Podcast'](#) (August 2020).
- Leah Ruppner, Kobi Leins and Piers Gooding, ['Algorithmic Bias and the Ethical Implications.'](#) *The Carnegie Council's AIEI's podcast*, (December 2020).

11 Peer-Reviewed Publications

Jeannie Paterson – Co-Director

- **Paterson, Jeannie** and Bant, Elise, 'Mortgage Broking, Regulatory Failure and Statutory Design' (2020) 31 *Journal of Banking and Finance Law and Practice* 7.
- **Paterson, Jeannie** and Bant, Elise, 'Should Australia Introduce a Prohibition on Unfair Trading? Responding to Exploitative Business Systems in Person and Online.' (2020) 44 *Journal of Consumer Policy* 1. <https://link.springer.com/article/10.1007%2Fs10603-020-09467-9>

- Clifford, Damian and **Paterson, Jeannie**, ‘Consumer Privacy and Consent: Reform in the Light of Contract and Consumer Protection Law’ in (2020) 94(10) *Australian Law Journal* 741. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3795141

Tim Miller – Co-Director

- Payrovnaziri, Seyedeh Neelufar, Chen, Zhaoyi, Rengifo-Moreno, Pablo, **Miller, Tim**, Bian, Jiang, Chen, Jonathan H, Liu, Xiuwen, and He, Zhe, ‘Explainable artificial intelligence models using real-world electronic health record data: a systematic scoping review’ (2020) 27(7) *Journal of the American Medical Informatics Association* 1173. <https://doi.org/10.1093/jamia/ocaa053>
- Madumal, P, **Miller, T**, Sonenberg, L, and Vetere, F, ‘Explainable Reinforcement Learning Through a Causal Lens’ in *Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence*, 2020. <https://ieeexplore.ieee.org/document/9097427/>
- Vered, M, Howe, P, **Miller, T**, Sonenberg, L, and Velloso, E, ‘Demand-Driven Transparency For Monitoring Intelligent Agents’ (2020) 50(3) *IEEE Transactions on Human-Machine Systems* 264.

Adam Lidders – Academic Research and Programs Manager

- **Lidders Adam**, and **Paterson, Jeannie Marie**, ‘Scrutinising COVIDSafe: Frameworks for evaluating digital contact tracing technologies,’ (2020) 45(3) *Alternative Law Journal* 153. <https://doi.org/10.1177%2F1037969X20948262>

Kobi Leins – Senior Research Fellow in Digital Ethics, CIS

- **Leins, Kobi**, Culnane, Christopher and Rubinstein, Benjamin IP, ‘Tracking Tacing and Trust: Contemplating Mitigating the Impact of COVID-19 through Technological Interventions,’ (2020) 213(1) *Medical Journal of Australia* 6. <https://doi.org/10.5694/mja2.50669>
- Culnane, Christopher and **Leins, Kobi**, ‘Misconceptions in Privacy Protection and Regulation,’ (2020) 36(2) *Law in Context* 49. <https://doi.org/10.26826/law-in-context.v36i2.110>
- **Leins, Kobi**, HanLau, Jey and Baldwin, Tim, ‘Give me Convenience and Giver Her Death: Who Should Decide What Uses of NLP are Appropriate and on What Basis?’ (2020) 58th *Annual Meeting of the Association of Computational Linguistics* 2908. <https://doi.org/10.18653/v1/2020.acl-main.261>

Simon Coghlan – Senior Research Fellow in Digital Ethics, CIS

- **Coghlan, Simon**, and Sparrow, Lucy, ‘The “digital animal intuition:” the ethics of violence against animals in video games.’ (2020) *Ethics and Information Technology* 1. <https://doi.org/10.1007/s10676-020-09557-9>
- **Coghlan, Simon** and **Leins, Kobi**, ‘Living Robots’’: Ethical Questions About Xenobots,’ (2020) 20(5) *The American Journal of Bioethics* W1. <https://doi.org/10.1080/15265161.2020.1746102>
- **Coghlan, Simon**, Cheong, Marc and Coghlan, Ben, ‘Tracking, tracing, trust: contemplating mitigating the impact of COVID19 through technological interventions,’ (2020) 213 *Medical Journal of Australia* 6. <https://doi.org/10.5694/mja2.50669>

Marc Cheong – Senior Research Fellow in Digital Ethics, CIS

- **Coghlan, Simon, Cheong, Marc** and Coghlan, Ben, 'Tracking, tracing, trust: contemplating mitigating the impact of COVID19 through technological interventions,' (2020) 213 *Medical Journal of Australia* 6. <https://doi.org/10.5694/mja2.50669>

12 Media articles

- ['Data isn't neutral and neither are decision algorithms'](#) Gabby Bush, Henrietta Lyons and Tim Miller, *Pursuit*, 15 September 2020. Also published by [IoTHub](#), 27 November 2020.
- ['You wouldn't hit a dog, so why kill one in Minecraft? Why Violence against virtual animals is an ethical issue'](#) Simon Coghlan and Lucy Sparrow, *The Conversation* and *Pursuit*, 25 September 2020.
- ['The Link Between Cybersecurity and our Economy'](#) Kobi Leins, *The Wire*, 17 July 2020.
- ['A little bird didn't tell me'](#) Marc Cheong, Kobi Leins, *Pursuit*, 17 July 2020.
- ['The Twitter hack targeted the rich and famous. But we all lose if trusted accounts can be hijacked'](#) Kobi Leins, *The Conversation*, 16 July 2020.
- ['When tools for a health emergency become tools of oppression'](#) Gabby Bush and Kobi Leins, *Pursuit*, 8 June 2020.
- ['The Privacy Paradox: Why We Let Ourselves Be Monitored'](#), Gabby Bush, Adam Ladders, Tim Miller and Jeannie Paterson, *Pursuit*, 12 May 2020.
- ['Are our new virtual workplaces equitable?'](#) Gabby Bush, Jeannie Paterson, Tim Miller and Adam Ladders, *Pursuit*, 26 April 2020.
- ['Do we really need a tracking app and is it safe?'](#) Kobi Leins, Simon Coghlan and Marc Cheong, *Pursuit*, 24 April 2020.
- ['Virus views: Freedom in the time of COVID-19'](#) Marc Cheong, *New Philosopher*, 1 April 2020.
- ['AI: It's Time for the Law To Respond'](#), Kobi Leins, *Pursuit*, 17 February 2020.
- ['Not bot, not beast: scientists create first ever living, programmable organism'](#) Simon Coghlan and Kobi Leins, *The Conversation*, 20 January 2020.

15 Videos

CAIDE has invested in the creation of a number of videos, which have been published on the University of Melbourne's YouTube page.

Three Questions with CAIDE – A video series that provides a brief overview of a topical issues.

- Tim Miller with Ben Rubinstein, ['Does the COVIDSafe app protect your privacy?'](#)
- Jeannie Paterson and Simon Coghlan ['AI and the future of exam supervision'](#)
- Tim Miller and Tatiana Cutts ['What do we lose when we outsource judgements to algorithms?'](#)

Launch Videos

- Jeannie Paterson and Tim Miller 'How did CAIDE come about?' (9 April).
- Dr Alan Finkel ['AI in my device not in the cloud'](#) (April 28).

Promotional videos for AI, Ethics and the Law – [view all these videos on CAIDE's website](#)

- 'AI, Ethics and the Law' Promotional trailer

- 'Her: What are the ethics of human-bot companionships?' Simon Coghlan
- 'iRobot: What can Asimov's three laws of robotics teach us about digital ethics?' Tim Miller
- 'Willy Wonka and the Chocolate Factory: Should machines decide who gets the chocolate?' Kobi Leins
- 'Orwell: What are the ethics being questioned in video games?' Marc Cheong
- 'Her, Ex Machina and Alexa: Why do service and companion robots have female voices?' Jeannie Paterson
- 'Altered Carbon: Are we creating a digitally equitable world?' Gabby Bush
- 'What can Minority Report teach us about the future of AI and Policing?' Adam Ladders
- 'The Matrix: What do we learn about regulating technology?' Henrietta Lyons
- 'Skyward: What are the Implications of voiced AI on diversity and inclusion?' Tatiana Cutts
- 'What can Wall-E teach us about algorithmic decision making?' Debbie Gonzalez Canada

15 Panels and Lectures

- Kobi Leins, Panel Discussion on '[Workplace Surveillance and the Future of Work](#),' *Centre for Responsible Technology*, (10 June 2020).
- Jeannie Paterson, [panel discussion on the launch of the Australian Society for Computer and the Law](#), with the Hon Justice Michael Kirby AC CMG (Patron), Director General Francis Gurry (World Intellectual Property Organisation), Julian Burnside AO QC (Founder VSCL), Prof Graham Greenleaf (Co-founder NSWSCSCL) and Dr Jed Horner (Standards Australia.) (14 July 2020).
- Jeannie Paterson, The Connected You: HOME alongside Jamie Skella (Chief Operating and Product Officer, Mogul) as part of The Connected You event series hosted by [Melbourne Connect](#), (6 August 2020).
- CIS Senior Research Fellow in Digital Ethics, Kobi Leins moderated the panel on Nanobiotechnology Applications for Delivery for the [United Nations Institute for Disarmament Innovations Dialogue](#), (21 August 2020).
- Jeannie Paterson and Inbar Levy (CAIDE Associate) spoke at the *Ian Potter Museum of Art's* '[MACHINE Interdisciplinary Forum Online](#)'. Jeannie spoke on digital advisers and human values while Inbar spoke on the potential for algorithms and machine learning to improve decision-making in the courtroom. Liz Sonenberg provided a response and chaired the Q&A (16 August 2020).
- CAIDE co-hosted a workshop with [Humanising Machine Intelligence at ANU](#) on [Consent and Consumer Manipulation](#). Jeannie Paterson and Mark Taylor (CAIDE Advisory Board) presented a paper on data fiduciaries and substantive fairness in privacy protection. Kobi Leins (Senior Research Fellow in Digital Ethics) with Lars Kulik (CIS) presented a paper on 'Does Australia Need A New Way to Define and Protect Private Information?', while CAIDE Associates Stacey Steele and Megan Richardson chaired sessions (16 August 2020).
- Jeannie Paterson participated in a virtual panel discussion on Privacy, the Consumer Data Right, and Human Rights and AI, with Sven Bluemmel (OVIC Privacy Commissioner), Veronica Scott and Paula Gilardoni (KPMG) organised by KPMG (May 15, 2020).
- Megan Richardson, Jeannie Paterson, Mark Taylor and Stacey Steele joined a panel hosted by Jonathan Liberman on '[Privacy post pandemic: restart or reset?](#)' (19 May 2020).
- Tim Miller delivered a lecture for Engineers Australia at their event '[Introduction to Artificial Intelligence and Digital Ethics](#)' (27 August 2020.)
- Tim Miller and Jeannie Paterson were interviewed as part of the [2020 IoT Hub Festival](#).

- Jeannie Paterson, with CAIDE Associate Fabio Mattioli, participated in a panel discussion for the Melbourne School of Government on 'The Future of FinTech Regulation' (22 Sept 2020.)
- Tim Miller was MC for the panel '[Can you trust and algorithm...how and why?](#)' for the Melbourne School of Engineering. Jeannie Paerson was one member of the panel.
- Jeannie Paterson spoke on a panel at the [Responsible AI Forum](#) for the Institute for Ethics in AI at the Technical University of Munich, (December 2020).

Board and Steering Committee Appointments

Members of CAIDE have been appointed to the following:

- **Jeannie Paterson** – Academic Steering committee of the Minderoo Tech and Policy Lab, University of Western Australia and the Cybersecurity CRC.
- **Kobi Leins** – Board of the Carnegie Council for Ethics in International Affairs.