

# Michael J Clark (wassname) | CV

## Michael J Clark

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**Summary:** ML engineer (8+ yrs) with peer-reviewed publications. Currently principal data scientist at Woodside Energy, Non-Executive Director at Cytophenix. Research interests: representation engineering, model evaluation, steering methods that work when output-level alignment fails.

### AI Safety Research

**AntiPaSTO: Self-Supervised Steering of Moral Reasoning** (Jan 2026) | [arXiv:2601.07473](#) | [GitHub](#) | [LessWrong](#)

- Gradient-based representation steering using model’s own behavioral consistency as signal
- Works without preference labels; outperforms prompting on out-of-distribution moral dilemmas
- Builds on [prior representation alignment work](#) that showed promise but suffered from instability

**S-space Steering for Eval-Awareness Control** (Apr 2026) | [GitHub](#)

- Replicated eval-awareness paper with novel singular-value-basis (S-space) steering
- Hawthorne gap on Qwen3-32B reduced to almost zero (1% vs prior work’s 26%)
- Apart Research Control hackathon 2026

**LLM Ethics Leaderboard** (Apr 2025) | [Website](#) | [GitHub](#)

- Evaluation framework for moral reasoning across 12+ frontier models

**Eliciting Suppressed Knowledge** (Mar 2025) | [GitHub](#)

- Contrastive prompting to surface RLHF-suppressed knowledge (20% improvement on TruthfulQA)

**LoRA Lie Detectors** (Dec 2023) | [GitHub](#)

- Low-rank adapters for deception detection (87% accuracy on held-out set)

### Publications

Ibrahim M, **Clark M**, Castelnau W. “Improving operational efficiency through condition-based monitoring and IoT technologies.” *Australian Energy Producers Journal*, 65(2), 2025. DOI: 10.1071/EP24092

Scott NJA, Butler AP, Butler AP, Berg KB, Butler PH, Carr JM, Cook NJ, **Clark MJ**, Anderson NG. “Pilot study to confirm that ovine fat and liver can be distinguished by spectroscopic tissue response on a MARS-CT.” *Endocrine Journal*, 57, S421-S422, 2010.

Zeller H, Dufreneix S, **Clark M**, Butler PH, Butler APH, Cook N, Tlustos L. “Charge sharing between pixels in the spectral Medipix2 x-ray detector.” *IEEE IVCNZ*, 363-366, 2009.

Berg KB, Carr JM, **Clark MJ**, Cook NJ, Anderson NG, Scott NJ, Butler AP, Butler PH, Butler AP. “Pilot Study to Confirm that Fat and Liver can be Distinguished by Spectroscopic Tissue Response on a MARS-CT.” *AIP Conference Proceedings*, 1151(1), 106-109, 2009.

Zainon R, Butler APH, Cook NJ, Butzer JS, Schleich N, De Ruyter N, Tlustos L, **Clark MJ**, Heinz R, Butler PH. “Construction and Operation of the MARS-CT Scanner.” University of Canterbury, 2009.

## Industry Experience

**Woodside Energy** – ML SME & Technical Lead | 2023-present

- Principal data scientist for major Australian energy company
- Published “Improving operational efficiency through condition-based monitoring and IoT technologies.” (see above)

**Cytophenix** – Non-Executive Director | 2023-present

- Founding board member of medical AI spinout (Perkins Institute, UWA)
- AI-powered antimicrobial susceptibility testing; TGA/FDA regulatory pathway
- Awarded \$1M in CUREator grants (Federal Medical Research Future Fund); raised \$1.3M pre-seed (Nov 2025)

**Three Springs Technology** – Director, Partner | 2019-present

- ML consulting for mining and energy; 15+ projects from research to deployment
- Developed open-source deep learning curriculum for E&P major
- Landgate SPUR grant (2016) for satellite-based water leak detection

**ThinkCDS** – Technical Director | 2016-2019

- Founded ML consulting firm (merged with Three Springs 2019)
- Point cloud ML, satellite imagery, reinforcement learning for mining

**Schlumberger / OMV** – Geophysicist | 2011-2017

- Seismic data loading, geophysics workflows; transitioned to ML 2016

## Education

**MSc Petroleum Geoscience** – Victoria University of Wellington | 2013-2014

Thesis: [The Neogene seismic stratigraphy and uplift history of the Western Chatham Rise](#)

**BSc Physics (1st Class Honours)** – University of Canterbury | 2006-2009

## Skills

**Languages:** Python, PyTorch, Transformers, einops, Pandas, NumPy

**Infrastructure:** Docker, Kubernetes, AWS, Git

**Methods:** Representation engineering, activation steering, model evaluation, interpretability, experiment design, time-series forecasting

## Community

[Perth Machine Learning Group](#) (3,400+ members) co-organizer since 2018. Active contributor on LessWrong and GitHub.

### Selected talks:

- *AntiPaSTO: Self-Supervised Value Steering* (Jan 2026) – interpretability research
- *AI Governance: Risk and Regulation* (May 2023) – WA Data Science Week panel
- *Experiments with GPT-2 Chatbots* (Aug 2019) – early LLM exploration
- *Transformer Network Architecture* (Jun 2019) – attention mechanisms, BERT/GPT
- *Deep RL for Bucketwheel Excavator Control* (Oct 2018) – industrial RL