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Lachlan Kermode
Backend engineer

Website: lachlankermode.com
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Engineering with a focus on the design and operation of machine learning in production. In my graduate work I focused on distributed systems, (vector) databases, and datacenter operating systems. I also have deep interest in both modern philosophy and the history of computer science: reading and writing about this interest is the focus of my PhD in Modern Culture and Media. See my website for more examples of my writing and open source work.

Skills

Languages	Rust (3 years), Python (5+ years), Node/JS (5+ years), Java, C/C++
Platforms	Linux (5+ years), AWS, GCP, Terraform, Apache Flink, Kubernetes, PyTorch, React, VueJS
Communication	English (mothertongue), Italian (fluent), Latin (some).
Other	Blender, Maya, Unity, Figma, After Effects

Technical Experience

Senior Software Engineer   **Feb 2021 — Sep 2021**
Halter   *Auckland, New Zealand*

- Specialising as a machine learning engineer, architected and built a feature store to compute real-time uplinks from IoT devices using Kinesis streams and Apache Flink on AWS.
- Contributed to microservices in Java, Node and Python (SNS/SQS, DynamoDB, and PostgresQL)
- Built, configured and monitored cloud infrastructure with Terraform, Concourse CI, Grafana, and AWS.

Advanced Researcher / Software Lead   **Jul 2018 — Jan 2021**
Forensic Architecture   *London, UK*

- Full stack engineering in React, Vue, Python and Golang for various full stack platforms.
- Developed machine learning workflow to train computer vision classifiers on synthetic data generated in Unity, and then to deploy on public domain media from Youtube and Twitter.
- Written and maintained devops CI/CD infrastructure in Ansible and Terraform for several live platforms.
- First author of paper at NeurIPS 2019 on the use of synthetic data in computer vision, as well as co-author of follow-up paper at WACV 2022.

CTO and co-founder   **Aug 2016 — Mar 2017**
DirectDrinks   *Wellington, New Zealand*

- Bootstrapped an end-to-end stack across web, mobile and tablet for a startup that provides a direct sales channels between large corporate suppliers and small resellers in the FMCG industry, disrupting a pipeline that is currently dominated by mid-tier redistributors.

Full stack and mobile freelancing   **Jun 2016 — present**
various

- Designed and developed MLOPs workflow in GCP for deploying inference capability at SMAT.
- Co-designed and developed website at The Syllabus.
- Developed Python libraries to simplify data engineering workflows from Jupyter at Merantix Labs.
- Developed an Objective C SDK for an OAuth2 verification flow and prototyped two React Native applications for Inflection.

Education

Masters in Computer Science, *Brown University*	2024
PhD in Modern Culture and Media, *Brown University*	exp. 2026
A.B. in Computer Science, *Princeton University*	2013 — 2018

Papers/Other

- Detecting Tear Gas Canisters With Limited Training Data. Ashwin D'Cruz, Christopher Tegho, Sean Greaves, **Lachlan Kermode**. (WACV 2022.)
- Objects of violence: synthetic data for practical ML in human rights investigations. **Lachlan Kermode**, Jan Freyberg, Alican Akturk, Robert Trafford, Denis Kochetkov, Rafael Pardinas, Eyal Weizman, Julien Cornebise. (NeurIPS 2019.)

I coordinate and run a reading group on technology and society called A.R.G.	2019 — present
I have several years experience giving workshops and teaching, more details in my academic CV.	2019 — present
I have contributed to exhibitions at Whitney (NY), De Young Museum (SF), Tate Britain (London), and others.	2018 — present
I have acted and written music for various musical and theatre projects, more details available in my portfolio.	2013 — present