

# Christopher Chiu

Homepage: <https://chiu.ai> | LinkedIn: [christopherhychiu](#) | GitHub: [chy-chiu](#) | Google Scholar

## EDUCATION

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### University of Cambridge

Cambridge, United Kingdom

*PhD in Applied Mathematics and Theoretical Physics*

*Jan. 2026 – Jan. 2030 (expected)*

- Supervised by Prof. Mihaela van der Schaar and Prof. Guillermo Sapiro. Fully funded by Apple.
- **Thesis:** *Enhancing LLM Agents through Multi-Agent Communication, Causality, and Game-Theoretic Reasoning*
- **Current work:** Developing formal framework for optimality conditions in multi-agent systems for data-driven scientific discovery; building multi-agent tool-use workflows for scientific reasoning
- **Research interests:** metacognition in multi-agent systems; medical AI evaluation; AI for scientific discovery

### Georgia Institute of Technology

Atlanta, GA

*Master of Science in Computer Science – Machine Learning*

*Feb. 2023 – May 2025*

- GPA: 4.0 / 4.0. Coursework incl. Machine Learning, Reinforcement Learning, Deep Learning, Grad. Algorithms
- Master's project advised by Prof. Elizabeth Cherry – developed *VizCOM, an open-source cardiac optical mapping analysis suite* (published at Computing in Cardiology 2025)
- Team Leader in DS@GT – achieved top-ranked performance in FungiClef 2024 (image classification challenge)

### University of New South Wales

Sydney, Australia

*Bachelor of Medical Studies / Doctor of Medicine*

*Feb. 2014 – Dec. 2020*

## EXPERIENCE

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### Harrison.ai

Sydney, Australia

*Senior Clinical AI Engineer / Clinical AI Fellow*

*Dec. 2021 – Oct. 2025*

- Designed annotation ontologies, built data ingestion and labelling pipelines, and led quality assurance across multiple CT datasets (>500,000 labelled studies total), coordinating 150+ radiologists at international sites
- Key technical contributor to a DINO/UNet-based object detection model for CT chest diagnostic support
- Contributed to development of a multi-modal VLM for radiology, with focus on the language model component
- Authored clinical research protocols for regulatory validation (TGA, FDA) of deployed AI diagnostic systems

### University of Sydney

Sydney, Australia

*Research Assistant*

*Jan. 2020 – Oct. 2025*

- Developed video classification models for quantifying ulcerative colitis disease activity from colonoscopy recordings
- Built prediction models for keratoconus disease progression; advised an ophthalmology trainee on Master's thesis
- Developed synthetic data augmentation for MRI motion artifacts; Applied domain transform manifold learning to real-time MRI-guided radiotherapy (published in *Medical Physics*)

### NSW Health (Sydney Local Health District)

Sydney, Australia

*Resident Medical Officer*

*Jan. 2021 – Jun. 2022*

## SELECTED PUBLICATIONS

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- **Chiu, C.**, Pitis, S., & van der Schaar, M. (2025). VivaBench: Simulating Viva Voce Examinations to Evaluate Clinical Reasoning in Large Language Models. *NeurIPS 2025 Datasets & Benchmarks Track*. [Paper]
- **Chiu, C.**, Zhang, S., & van der Schaar, M. (2025). Strategic Self-Improvement for Competitive Agents in AI Labour Markets. *Under review, ICML 2026*. [Paper]
- **Chiu, C.**, Heil, M., Kim, T., & Miyaguchi, A. (2024). Fine-Grained Classification for Poisonous Fungi Identification with Transfer Learning. *CLEF 2024 Working Notes*. [Paper]
- Buchlak, Q.D., ..., **Chiu, C.**, et al. (2024). Effects of a comprehensive brain CT deep learning model on radiologist detection accuracy. *European Radiology*, 34, 810–822.
- Waddington, D.E.J., ..., **Chiu, C.**, et al. (2023). Real-time radial reconstruction with domain transform manifold learning for MRI-guided radiotherapy. *Medical Physics*, 50, 1962–1974.

## SKILLS

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**Programming:** Python, C/C++, SQL, JavaScript

**ML / AI:** PyTorch, JAX, vLLM, VerL, LangChain/LangGraph, Ray, NumPy, pandas

**Medicine:** AHPRA registered medical practitioner. Certified in ALS2, GCP.

**Languages:** Fluent in English, Mandarin, Cantonese