Christopher M. Thompson

Curriculum Vitae

Education

2024-25 **M.Phil. Ethics of AI, Data, and Algorithms**, *Cambridge University*, Cambridge, UK.
King's College

2019-23 **B.A. University Scholar**, *Baylor University*, Waco, TX, USA.
CONC. Computer Science, Philosophy; MIN. Music
Cumulative GPA: 3.95/4.00, *summa cum laude*

Research Interests

Philosophy of AI

AI Ethics; Artificial Morality; Machine Minds

Philosophy of Education

Inter- & Cross-disciplinary Pedagogy; Liberal Education

Leibniz

Logic, Computation, & Formal Systems

Publications & Writings

[1] *Trading Fours with Mr. PC: Toward an Improved Model for Jazz Synthesis*, with G. Hamerly (undergraduate thesis), 2023.

[2] Thompson, C., "Even the Stones", *The Phoenix* Literary Magazine, 2023.

[3] Rivas, P., Thompson, C., et al. "AI Ethics for Earth Sciences", in *Artificial Intelligence in Earth Science*, edited by Sun, Z., Cristea, N., and Rivas, P., pp. 379-396. Elsevier, 2022.

Conferences & Presentations

Oct. 2024 **Python Basics**, *Leverhulme Center for the Future of Intelligence*.
Quarter-term Python basics module, independently designed and delivered to ~15 non-technical cohort students; content covered roughly equivalent to 1 U.S. semester of computer science.

Oct. 2022 **The Intellectual Life by A.G. Sertillanges (with E. Corey)**, *Honors Program Colloquium*.
First undergraduate student to ever lead an Honors Program Colloquium.

Grants & Funding

2021-22 **Beth Wilson Memorial Scholarship**, *Baylor University*.
Additional departmental funding (mathematics) for undergraduate study.

2019-23 **Faculty Scholarship**, *Baylor University*.
Full funding for undergraduate tuition.

2019-23 **National Merit Scholarship**, *National Merit Scholarship Corporation*.
Additional funding for undergraduate study.

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Upper-Level Coursework

- Machine Learning Theory (g)
- Theory of Computation (g)
- Epistemology
- Philosophy of Mind
- Ancient, Medieval Philosophy
- Workshop in Teaching Philosophy (g)
- Early Modern Philosophy (a)
- Mathematical Logic (a)
- Evaluation of AI Systems (g)
- Ethics of AI Prediction (g)

(a) audited; (g) graduate-level; Baylor University; Cambridge University

Employment

2023-24 **Research Scientist**, *Baylor Research & Innovation Collab.*, Waco, TX.
Executed end-to-end development of control software for microscope imaging systems; automated spectroscopic data collection; analyzed sensing data using quaternion machine learning.

2021-23 **Master Tutor**, *Baylor University*, Waco, TX.
Provided academic support for undergraduates in an array of courses:
Pre-Calculus, Calculus I, II, & III, Linear Algebra, Introductory Computer Science, Discrete Mathematics, Data Structures, Logic, Music Theory I-IV.

2021-22 **Student Worker**, *Int'l. Collegiate Programming Contest*, Waco, TX.
Built and released three international websites and wrote documentation for its upkeep; served as a resource for ICPC coordinators around the country.

Involvement & Service

2024-25 **Intellectual Forum**, *Jesus College Cambridge*.
Functional chief-of-staff for operations of the 2024 & 2025 (upcoming) Leaders in Responsible AI Summits.

2024 **AI Safety Fundamentals (Alignment)**, *Blue Dot Impact*.
Completed intensive 12-week course; engaged a range of technical AI alignment research agendas through cohort-based study and capstone project.

Selected Projects

2022-Present ***Spiritual Machines***, *Independent*.
Short story cycle exploring topics in the philosophy of AI through narrative; includes *Even the Stones*, *Tell Me When It Eats*, and more.

2023-24 **bigSPE**, *Baylor Research & Innovation Collab.*
Python-based software for collecting and visualizing spectroscopic data; unified camera, stage, and laser controls for high-fidelity scans and laser etching at the micrometer level; designed full suite of tools for publication-quality data analysis.

2021-23 **Mr. PC**, *Baylor University*.
Transformer-XL model trained to generate improvised jazz solos; implemented novel music-as-language data representation; approximated human performance to within 23% by the Minkowski fractal dimension metric.

Programming Languages

Python (PyTorch, TensorFlow, NumPy, PyQt), C++, Lua, LaTeX

Languages

English **Mothertongue**
Chinese **Basic** *Basic words and phrases only*

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