

Christopher M. Thompson

Curriculum Vitae

Education

- 2024-25 **M.Phil. Ethics of AI, Data, and Algorithms**, Cambridge University, Cambridge, UK.
Accepted offer for September 2024 entrance
- 2019-23 **B.A. University Scholar**, Baylor University, Waco, TX, USA.
SEC. Philosophy; MIN. Computer Science, Music
Cumulative GPA: 3.95/4.00, *summa cum laude*

Publications & Preprints

- [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. 2022 *The Intellectual Life by A.G. Sertillanges*; Colloquium (led with E. Corey), **Honors Program Colloquium**, Baylor University; Waco, TX.

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.

Research Interests

- AI Ethics & Philosophy of AI
- Natural Language Processing
- Computation Theory
- Philosophy of Education

Upper-Level Coursework

- Intermediate Logic
- Philosophy of Mind
- Machine Learning Analytics
- Intro to Machine Learning (g)
- Intro to Computation Theory (g)
- Workshop in Teaching Philosophy (g)

(g) graduate-level coursework

Employment

- 2023-Present **Research Scientist**, *Baylor Research & Innovation Collab.*, Waco, TX.
Complete and test the hardware and software for chemical microscope imaging systems; automate spectroscopic data collection; analyze sensing data using machine learning.
- 2021-2023 **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.

Involvement & Service

- Present **Responsible Tech Mentorship Program**, *All Tech Is Human*.
Selected for Ethical AI mentorship; receive career guidance and peer support in responsible tech; conduct fieldwork and drafting for new installment of *Spiritual Machines* (below).
- Present **AI Safety Fundamentals (Alignment)**, *Blue Dot Impact*.
Chosen for cohort-based study from over 1,000 applicants; engage with a range of technical AI alignment research agendas through guided curriculum and capstone project.
- Mar. 2024 **Intellectual Forum**, *Jesus College Cambridge*, Cambridge, England.
Functional chief-of-staff for operations of the 2024 Leaders in Responsible AI Summit.
- 2021-2023 **Baylor Tutoring Center**, *Baylor University*, Waco, TX.
Served as Master Tutor in computer science; leadership duties included developing weekly resources for other tutors and leading weekly group tutoring sessions in computer science.
- 2021-2023 **Rivas AI Lab**, *Baylor University*, Waco, TX.
Joined graduate-level lab as an undergraduate; contributed to research presentations, conducted research on AI ethics and AI-generated music.

Selected Projects

- 2021-2023 **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.
- Present **speWidget**, *Baylor Research & Innovation Collab*.
Python-based software for visualizing spectroscopic data; optimized image focusing efficiency by 30x using edge detection; designed full suite of tools for publication-quality data analysis, incl. point spectroscopy, baseline correction, and elemental mapping.
- 2022-Present ***Spiritual Machines***, *Independent*.
Short story cycle exploring topics in AI ethics, human-computer interaction, and philosophy of mind through narrative; includes *Even the Stones*, *Tell Me When it Eats*, *Mojibake*, and more.
- 2020-2023 ***Identity Thief***, *Independent*.
Role-based social deduction game written in Lua with a small cult following, updated continually over three years; received an overall approval rating of 94% over ~5,000 plays.

Programming Languages

Python (PyTorch, TensorFlow, NumPy, PyQt), C++, Lua, L^AT_EX

Natural Languages

English **Mothertongue**

Chinese **Basic**

Basic words and phrases only