

Zekun Wu

AI Ethicist, Researcher, Engineer

Flat 20, Dacre House
17 Beaufort Street, SW3 5BH, London, UK
☎ +44 07541369300
☎ +86 13823366393
✉ wu981526092@163.com

Education

- 2024.01– Present **MPhil/Phd in Computer Science (Part-Time)**, *University College London, London, UK*
- Conducting research on "Sustainable and Responsible AI Systems" to address emerging sustainability challenges and ethical considerations in AI systems.
 - This research is co-supervised by Dr. María Pérez-Ortiz, Chair of the UNESCO, Principal Investigator of Sustainability and Machine Learning Group at UCL, and Dr. Adriano Koshiyama at Holistic AI.
 - First co-author of the paper titled "Auditing Large Language Models for Enhanced Text-Based Stereotype Detection and Probing-Based Bias Evaluation," currently under review for the COLM 2024 conference. A preprint is available at <https://arxiv.org/abs/2404.01768>.
 - Corresponding author of the paper "Advancing Multimodal Data Fusion in Pain Recognition: A Strategy Leveraging Statistical Correlation and Human-Centered Perspectives," under review for the ACII 2024 conference, with a preprint available at <https://arxiv.org/abs/2404.00320>.
 - Delivered a two-hour guest lecture on "Accountable, Transparent, and Responsible Artificial Intelligence" for the UCL COMP0195 Level 7 module, aimed at Master's students, in March 2024.
- 2022.09– 2023.09 **MSc in Artificial Intelligence for Sustainable Development (Full-Time)**, *University College London, London, UK*
- Achieved the highest overall grade, was placed on the Dean's List (5%), and received the £3000 Carbon Re Prize for ranking first in academic excellence within the program, graduating with a Distinction and scores of 81.8% overall and 87% for the thesis.
 - Authored the thesis paper, which served as the basis for the paper titled "Towards Auditing Large Language Models: Improving Text-based Stereotype Detection." This paper was accepted for a poster presentation at the NeurIPS 2023 SoLaR Workshop under the guidance of Dr. Adriano Koshiyama and Dr. Sahan Bulathwela. Further details on the NeurIPS SoLaR Workshop can be found at <https://nips.cc/virtual/2023/78925>, and a preprint of the paper is accessible at <https://arxiv.org/abs/2404.01768>.
- 2022.07 **Summer School in Data Science and Big Data Analytics (Full-Time)**, *University College London, London, UK*
- Awarded the Highest Overall Grade for the session and ranked 3rd overall in the summer school, securing a Grade A with a score of 85.65%.
 - Advanced proficiency in R programming, focusing on data science and sophisticated statistical techniques.

- 2019.09– **BSc in Computer Science (Full-Time)**, *University College London*, London, UK
- 2022.09
- Graduated with Upper Second Class Honours, achieving an overall grade of 68.35
 - Participated in the 2020 ULTRA Coding Competition, ranking 93rd worldwide under the alias "Active Red Giraffe".
 - The BSc thesis, supervised by Prof. John Shawe-Taylor—focused on "Sentiment Mapping and Matching between Audio and Text Representation". This interdisciplinary study examined state-of-the-art mapping techniques in natural language processing and audio analysis, contributing to the field of sentiment cross-modality mapping.
 - Led a team for a corporate project with Avanade, developing NLP embedding tools to detect implicit biases like gender bias in hiring pipelines by analyzing semantics in CV writing, utilizing Django REST for backend and React for frontend, with the project showcased at <http://students.cs.ucl.ac.uk/2020/group9/>.
 - As a Research Member in the Cetus-Talk Summer Research Program, completed a deep learning project under Professor Pietro Lio from the University of Cambridge.
- 2017.09– **A Level CIE (Full-Time)**, *Wuhan Britain-China School*, Wuhan, China
- 2019.06
- Achieved A Level CIE results: Economics A*, Mathematics A*, and Computer Science A.
 - Awarded the Super Econ Bronze Prize in the 2019 National Economics Challenge China Finals; subsequently invited as a speaker at the 2020 challenge, where I delivered a speech to over 100 students and shared a personal story on the official online channel.
 - Served as a Teaching Assistant for IB Economics, assisting in the delivery of course material and supporting student learning.
 - Co-led the WHBC Badminton Club as President, organizing and managing inter-school badminton leagues to promote competitive sport and team spirit.
 - Served as the Director of Fundraising for the Fungi Charity Club, leading fundraising initiatives that supported charitable causes.

Work Experience

- 2023.05– **AI Researcher (Full-Time)**, *Holistic AI*, London, UK
- Present
- Responsible for the research and engineering of the company's AI auditing products, specializing in the monitoring and benchmarking of Large Language Models (LLMs) for the AI Safeguard product. Developed and maintained domain-specific RAG tailored for the AI policy sector within the AI Tracker product. Engineered and maintained the automation processes within the AI Governance Platform product.
 - Co-authored the paper "Eliciting Personality Traits in Large Language Models," which investigates state-of-the-art LLMs using computational language analysis to assess the Big Five personality traits. A preprint is available at <https://arxiv.org/abs/2402.08341>.
 - Responsible for student collaboration projects with UCL at both PhD and Master's levels, co-supervising and proposing over 10 projects. Additionally, led two one-hour meetings weekly to coordinate project progress and ensure alignment with academic goals.
 - Conduct interviews for Machine Learning and Software Development Research Engineer intern candidates, having conducted over 40 interviews.
 - Lead weekly 1-2 hours ML training workshops for the Software Engineering team.
 - Invited speaker for a 30-minute presentation at the Ofcom MCC Educational and Networking Initiative in Manchester, UK, in March 2024.
 - Presented research on LLM stereotypes at the UNESCO Global Forum on the Ethics of AI 2024 (IRCAI) via a video presentation, available at <https://www.youtube.com/watch?v=fBxdDVTEo0o>.

- 2023.01– **Technical Consultant (Casual)**, *Meta Profiling*, London, UK
 Present ○ Collaborated with psychologists from UCL and UOL Goldsmith to develop a application leveraging Large Language Model (LLM) for analyzing psychometric test results and constructed a chatbot that assists users in analyzing and discussing these results. The initial demo was built on Hugging Face using Streamlit and Python.
- 2022.05– **Co-Creator (Casual)**, *UCL Downstream AI Art Project*, London, UK
 Present ○ Collaborating with artist Freya Gabie, UCL Public Art, the British Library, and the Dementia Research Institute to lead the development of an AI Art installation for MRI waiting rooms at London's Dementia Research Institute. The project focuses on enhancing patient mental health by designing a responsive system that synchronizes user-input text with therapeutic natural water flow sounds, creating a calming environment for patients.
 ○ For additional information on the project, please visit https://www.ucl.ac.uk/ion/sites/ion/files/uclqision-annual_review-2022-23.pdf.
- 2021.01– **Founder (Casual)**, *Seele Art Labels (Online Art Collection Studio)*, Online
 2023.12 ○ Successfully established and managed the studio's online platform on Xianyu, Taobao, and WeChat, generating over 2,500,000 RMB in revenue. Visit the studio's Xianyu profile by searching for the user SEELE.ART in the Xianyu App.
 ○ Curated a diverse portfolio of art products, including paintings, jewellery, bearbrick, and sneakers, consistently achieving a profit margin of 12-15% over a three-year period. Established collaborations with various art studios to reduce the costs.
- 2020.08– **Algorithm Engineer Intern (Full-Time)**, *DeepBlue Technology*, Shanghai, China
 2020.09 ○ Contributed to the development of a machine learning pipeline for vending machines, incorporating Message Queuing Telemetry Transport (MQTT) and the Model-View-Presenter (MVP) framework.
- 2020.06– **International Business Intern (Full-Time)**, *China Construction Bank*, Wuhan, China
 2020.07 ○ Managed the statistical analysis and reporting for the International Statement of Balance of Payments, delivering financial insights. Improved operational processes by developing Python scripts for the automated collection, calculation, and generation of financial statements, enhancing efficiency and accuracy.
- 2020.04– **Full Stack Engineer Intern (Full-Time)**, *Jin Xin Rong Tian Technology*, Shenzhen, China
 2020.05 ○ Developed web crawler using Alibaba Cloud RPA technology for targeted data filtering and collection optimizing data acquisition processes. Designed and implemented an archive selection store website utilizing Flask.
 ○ Designed and streamlined the workflow for the Landray office's automatic EKP system, customizing it for FangDD's operations.
- 2020.10– **Computer Science Educator (Casual)**, *Various Institutions*
 2023.04 ○ Acted as a Computer Science Teacher at Huameng Education (2022.01–2023.04), providing online teaching for A-level, IGCSE, AP.
 ○ Acted as a Teaching Assistant at Infinity Future International Education (2020.10–2021.01) in Wuhan, China, specializing in A-level and IGCSE CS teaching.

Skills and Languages

- Skilled in programming languages including Python, Java, C, and R, among others, proficient in MLOps, native in Chinese, fluent in English, and intermediate in Japanese.