

CARMEN CHENG (she/her)

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EDUCATION

MS/PhD in Computer Science **2022 – Present**

Nanyang Technological University, Singapore

- One of six candidates selected for the Alibaba-NTU Talent Programme.
- Research interests: Multimodal LLMs and VLMs; AI ethics, fairness, and legislations (particularly the social impacts of AI); interpretability of black-box systems; debiasing and causality.

BA with Honors in Computer Science, Critical Media & Cultural Studies **2014 – 2018**

Rollins College, Winter Park, FL, USA

- Summa Cum Laude, GPA: 3.9/4.0
- One of seven students to receive the Alford Scholarship to attend Rollins College.

RESEARCH

Hallucination in Lightweight MLLMs **Ongoing**

- Manuscript in preparation for submission.
- We investigate training-free solutions to alleviate hallucination in lightweight MLLMs on strictly visual-dependent VQA benchmarks.

Towards Debaised Source-Free Domain Adaptation **2024**

- Pending publication status.
- Identified a critical shortcoming of conventional SFDA in addressing source-learned spurious correlations and proposed a simple contrastive objective for bias mitigation during adaptation.

Predictive Analytics in the Criminal Justice System: Media Depictions and Framing **2018**

- Presented at the ACM Student Research Competition at the 2018 Grace Hopper Celebration of Women in Computing in Houston, TX.
- Studied the socioeconomical implications of US law enforcement and predictive policing through an analysis (i.e., grounded theory approach) on language and framing adopted by news media.

Predicting the Popularity of Songs Using Musical Features **2017**

- Presented at the Student-Faculty Collaborative Scholarship at Rollins College.
- Investigated the impact of acoustical features and other metadata on the likeliness of a song becoming a hit and reaching the Billboard charts using a single-variable logistic regression model for classification.

WORK EXPERIENCE

AI Advisor **2024 – Present**

Wenti Labs, Singapore

- Engineer a solution to autonomously identify specified architectural symbols (e.g., light fixtures) from high-resolution construction floor plans.

Research Consultant **2024 – Present**

Nanyang Technological University, Singapore

- Lead research and development on the use of large language models to assess the student essay writing process and generate a detailed summary of insights and feedback (for use by educators).

Technical Product Owner and Full-Stack Developer **2020 – 2022**

Zuellig Pharma, Singapore

- Led a team of 60+ engineers on eZConsult, a telehealth app with over 2,000,000 registered users, and eZVax, a fully scalable COVID-19 vaccine management solution for client use in the Philippines.

Site Reliability Engineer (Siri Search) **2018 – 2019**

Apple Inc., Singapore

- Managed and troubleshooted multiple environments hosted in data centers across the world to ensure 100% up-time for production services.

SKILLS & PROFICIENCIES

Languages: English, Mandarin

Technical: Python, pytorch, Java, R, MATLAB, SQL; Linux, Docker, Azure

Eligible for the [H-1B1 visa](#) in the US and the [HPI visa](#) (non-sponsorship) in the UK.