

TSANG Tsz-Hin, Jason

[GitHub](#) | [LinkedIn](#) | [Website](#) | jasontsangtszhin@gmail.com

EDUCATION

The Chinese University of Hong Kong, Hong Kong

BSSc in Data Science and Policy Studies

Master's List (2022, 2023), Dean's List (2023)

Social Science Faculty Scholarships 2024-25 (Nominated)

Straight As in 3rd and 4th Year

Sept 2021 – July 2025

GPA: 3.7/4.0

Technical University of Munich, Germany

Semester Exchange, Politics & Technology

Reaching Out Award (2024), Scholarship for Semester Exchange (2024)

Attended master-level courses on Natural Language Processing and Large Language Model

Apr 2024 – Aug 2024

Grade: 90%

RELEVANT COURSEWORK

Technical Courses: Intro to Blockchain (A), Database System (A), Natural Language Processing (A), Machine learning for Public Policy (A), Machine Learning for Economy (A), AI for Social Good (A), Data Analytics for Public Policy (A), Social Media Analytics (A), Social Network Analysis (A-), Intro to Java (A-)

Professional Certificates: Mathematics for Machine Learning and Data Science Specialization (Coursera), Game Theory (Stanford), IBM Machine Learning Specialization (IBM), Blockchain Basics (University of Buffalo)

RESEARCH FOCUS

Research Domains: Human-AI Communication; Political Communication; Misinformation; Climate Change

Computational Methods: GenAI; Agentic AI; Retrieval-Augmented Generation; Knowledge Graph; Data Mining; Graph Neural Network (GNN); Social Network Analysis (SNA)

RESEARCH EXPERIENCE

CUHK School of Journalism and Communication, Hong Kong

Research Assistant

Jan 2025 – Present

- Supervised by Prof. LIANG Hai
- Spearheaded the creation of cutting-edge Retrieval-Augmented Generation pipelines integrating Wikipedia, over 200 academic papers, and meticulously curated datasets focusing on the dynamics of social movements
- Pioneered the development of user-centric applications enabling seamless querying of a vector database, empowering users to effortlessly extract in-depth insights on social movements

CUHK JC School of Public Health and Primary Care, Hong Kong

Research Assistant

Sept 2024 – Present

- Supervised by Prof. Johnson Zixin Wang
- Worked on project titled “Acceptability, usability, and preliminary effectiveness of ChatGPT in increasing seasonal influenza vaccination uptake among older adults in Hong Kong”
- Developing a vaccination chatbot utilizing GPT-4o with Retrieval-Augmented Generation, focusing on vaccination information and spot details to mitigate model hallucination
- Deployed the chatbot on a web app using Microsoft Azure Service, offering users access to vaccination-related information
- Attaining a remarkable 3.9 out of 4.0 on the 3C metrics (Correct, Clear, Concise) among independent experts, ensuring accurate, clear, and concise delivery of knowledge
- Collaborated on a pretest-posttest experimental design to compare participant groups and evaluate the extent of change following the intervention of an AI chatbot

CityU Department of Social and Behavioural Sciences, Hong Kong
Research Assistant

Sept 2024 – Present

- Supervised by Prof. FUNG Lai Chu Annis and Dr. TAM Wai Yiu Nelson
- Worked on project titled “Applications of AI Based Chatbot ChatGPT and E-learning for Practicing Social Casework Skills through Role-play and Web-based Multimedia Technology”
- Development of an AI-driven social worker chatbot utilizing GPT-4o with Retrieval-Augmented Generation, tailored to engage with social work teaching materials
- Deployment of the chatbot on a web application leveraging Microsoft Azure Service
- Leveraging AI-based technologies and e-learning methodologies to promote self-directed learning and skill enhancement among social work students
- Project number: 6000862; Grant Type: Teaching Development Grant (TDG)

Climind, Hong Kong
Research Assistant

Sept 2023 – Present

- Co-led the development and fine-tuning of Large Language Models (LLMs) tailored for climate change, enriching data-driven insights essential for researchers, policymakers, and financial institutions
- Pioneered the establishment of a comprehensive Climate Change database encompassing intergovernmental reports, academic papers, and company ESG reports
- Implemented an information retrieval pipeline for an AI system on the Climind platform

Centrum Stosunków Międzynarodowych, Warsaw Poland
Research Intern

Aug 2022 – Sept 2022

- Conducted extensive research on artificial intelligence and 5G technology, and analyzed its potential implications for technological cooperation among various countries

WORK EXPERIENCE

HKSAR Government, Hong Kong
Administrative Officer Intern

Dec 2024 – Jan 2025

- Contributed to the proposed amendment of the Cap. 625 Electronic Health Record Sharing System Ordinance
- Conducted in-depth comparative policy research on eHealth and Electronic Health Record Sharing Systems
- Played a key role in the development of a locally trained large language model at the Health Bureau, offering valuable advice and insights to administrative officers
- Cultivated robust relationships with high-ranking officials within the Hong Kong SAR government

Laboratory for AI-Powered Financial Technologies Limited, Hong Kong
Data Science Intern

June 2023 – Aug 2023

- Played a pivotal role in aiding team members with data cleaning and pre-processing of financial data, ensuring data precision and consistency for analytical and modeling tasks
- Actively engaged in diverse data scraping projects and proficiently organized scraped data into SQL databases
- Engineered robust systems like Bitcoin Whale Alert and Exchange NetFlow for comprehensive on-chain data analysis
- Oversaw the management and upkeep of the Bitcoin database to extract valuable insights on crypto transactions
- Implemented machine learning models such as KNN and Decision Tree to identify transaction patterns

GreenSafety Technology Limited, Hong Kong
Intern

Nov 2022 – Feb 2023

- Conducted in-depth analysis of driving safety and energy consumption patterns for public transport and construction vehicles
- Spearheaded data validation initiatives, utilizing a vast vehicle video database to pinpoint hazardous driving practices and significantly contributed to the advancement of transportation safety measures

NEOMA, Hong Kong
Intern (AI, IoT, app)

June 2022 – Aug 2022

- Orchestrated the setup and validation of more than 500 data touchpoints and sensors for the FIFA World Cup Qatar 2022
- Fostered collaboration across diverse teams to facilitate the smooth integration of data touchpoints and sensors with cutting-edge AI and IoT systems, facilitating real-time data aggregation and analysis
- Executed stringent quality assurance measures and produced comprehensive reports to guarantee the precision and dependability of the integrated systems

PREPRINTS & PUBLICATIONS

Fine-Tuning Pre-Trained Transformers for Climate Claim Verification

Dec 2023

DOI: 10.13140/RG.2.2.35652.03200

- Supervised by Dr. CHOW Yan Chi, Vinci from the CUHK Department of Economics
- Proposed a novel remedy by introducing a new fact-checking dataset that integrates data from CLIMATE-FEVER with web-scraped content, culminating in a comprehensive dataset featuring 8,115 annotated claim-evidence pairs
- Leveraged this enhanced dataset to fine-tune a range of pre-trained transformers for climate claim verification tasks. Notably, the top-performing RoBERTa model achieved an accuracy of 0.7288 and an F1-score of 0.7229, surpassing the previously reported state-of-the-art F1-score of 0.7182

OPEN-SOURCE EXPERIENCE

Climate&Tech AI Think-Tank, Berlin Germany

Open-Source Contributor on GitHub

- Collaborated with experts from the Climate&Tech AI Think-Tank and University of Zurich to build an open-sourced multi-agent fact-checker
- Spearheaded the development of advanced Retrieval-Augmented Generation pipelines for AI Agents
- GitHub: <https://github.com/climateandtech/factchecker>

Fine-Tuning Pre-Trained Transformers for Climate Claim Verification

Sole Author on Hugging Face

- Fine-tuned a state-of-the-art RoBERTa model on Climate Claim Verification named climate-fever-plus-RoBERTa
- Released the most extensive Climate Claim dataset to date under the title climate_fever_plus, effectively addressing data imbalances by 50%
- Surpassed 1,000 downloads and counting
- Hugging Face: https://huggingface.co/datasets/jasonth/climate_fever_plus