

ZHENG Shouwen (Peter)

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EDUCATION BACKGROUND

The Hong Kong Polytechnic University (PolyU)	09/2021 - 09/2025
Major: BSc (HONS) in Computing GPA: 3.27 / 4.3	Hong Kong
Minor: Applied Mathematics	
The Chinese University of Hong Kong (CUHK)	09/2025 - Present
Major: MSc in Information Engineering (expected in November 2026)	Hong Kong
Programming: proficient in Python, C++, Java, SQL, HTML, JS, CSS	
Computer Skills: Full Stack Development (React.js / Vue.js / - Flask / Fastapi / Spring Boot / - PostgreSQL / Redis); Google Cloud +K8S; Figma (Design); Unity &UE5 (Modeling & Game)	

ENGINEERING EXPERIENCE

Edison.ai.	06/2024 - 08/2024
<i>Software Engineer</i>	Tokyo, Japan
- Conducted embedded system development with Arduino, configuring camera, temperature, humidity and atmospheric pressure sensors and transferring relevant data with JSON to a self-established website - Accomplished back-end development for a Chrome extension using ChatGPT to include the functions of user logging and purchase schemes - Built a user management and planning subscription framework based on Express, Stripe, and Google Cloud for the Chrome extension - Use Node.js for front-end side of application, used Vue to enable third-party logging, updated user information with Firebase, and realized Stripe checkout	
BreathingCore (a Student Entrepreneurship Organization)	09/2022 – Present
<i>Co-founder & Front-end and AI Interface Developer</i>	Hong Kong
Co-established a company “BreathingCore” in Hong Kong and responsible for code writing, receiving subsidies from the local government and schools	
Government Operation and Maintenance Center, Inspur	Summer 2023
<i>Software Engineering Intern</i>	Yichang, China
- Developed Python scripts to interface with government APIs, ensuring lawful data retrieval, implemented hash encryption and used ftplib for SQL-based storage operations on the government cloud - Engineered an BFS algorithm for the rapid matching of personal data against the government service database, achieving 100% accuracy and speeding up license application processes	

RESEARCH & COMPETITION EXPERIENCE

Media anomaly detection dataset construction and benchmarking	02/2025 - Now
<i>First Author & communication Author</i>	
- Constructed dataset of 15,000 manually annotated depression risk social posts - Comprehensive benchmarking tests (Transformer, BERT, LLM) have been conducted to prove that the dataset has good accuracy and universality	
Multimodal emotion detection in conversations	12/2024 - 05/2025
<i>Capstone Project with Prof. Xiaomin Wo as Advisor</i>	

- Based on the 2024 SOTA model: GraphSmile innovates by experimenting with symmetric distillation, gated fusion, and noise reducer strategies, surpassing all baselines in experiments.
- Developed a web application to demonstrate the model, integrated LLM for conversations, and used the Live2D plugin for 2D character emotion.

IEEE BigData 2024 Cup: Detection of Suicide Risk on Social Media

06/2024 - 09/2024

Team Leader & Code Writer with Doctor Alex Li as Advisor

- Led the six-member team to train standard data sets, coordinated work among members, published paper *Enhancing Suicide Risk Detection with a Multisource Data Filtering and Fusion Optimization Framework (MDF-FOF)*
- Wrote code and adjusted established models to improve their performance
- Won the first place among all the 47 registered teams around the world

News Classification and Fake News Detection Based on Emotional Trends

05/2024

Code Writer with Associate Prof. Chung, Fu-lai Korris as Advisor

- Developed a model for topic classification, topic exploration, fake news classification, and sentiment trend analysis on news headlines
- Applied TF-IDF and attention-based BERT for feature extraction, K-means for topic clustering, and CNN, RNN, RF, and DT models for fake news classification
- Achieved 92% accuracy with stable classification results with sentiment prediction and topic exploration performing well

Emoticon Classification and Prediction Focusing on Feature Extraction

03/2024

(Individual Project with Professor Xiaoyong Wei as Advisor)

- Developed a supervised learning system to predict different types of emojis with a focus on image preprocessing
- Used a manually annotated dataset from Emoji Kitchen, and applied HOG, SIFT, and LBP for edge detection and feature extraction, and KNN for classification, achieving 51% accuracy

HONORS & AWARDS

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| ■ 3 rd Place in IEEE BigData 2024 Cup: Detection of Suicide Risk on Social Media | 09/2024 |
| ■ Twice PolyU Micro Fund Nomination | 2023&2024 |
| ■ The Second Half Year of 2023 Polytechnic University Start-up Fund POC | 10/2023 |
| ■ The Merit Award in PolyUHack in 2023 | 05/2023 |
| ■ First Prize in 2023 Greater Bay Area Innovation and Entrepreneurship Competition | 08/2023 |
| ■ Dean's Honor List in 2024-2025 | 09/2025 |

ADDITIONAL INFORMATION

Language skills: Mandarin (Native), English (Advanced), Cantonese (Basic)

Hobbies: Band drummer, toured many Hong Kong universities (HKUST, POLYU, CityU...); Music Production; Film Art and Literary Commentary; Fitness