Boshi Xu

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The Chinese University of Hong Kong, Shenzhen   2001 Longxiang Road, Longgang District, Shenzhen, China

EDUCATION

The Chinese University of Hong Kong, Shenzhen   September 2022 - June 2025 (Expected)

BSc in Computer Science and Engineering

• **GPA:** 3.1

• **Honors:** Social Practice Award

McMaster University   September 2020 - May 2022

BEng in Computer Engineering (Incomplete)

• **GPA:** 3.6

• **Honors:** The McMaster Honour Award, Deans Honor List

PUBLICATION

H. Li, R. Gong, C. Wang, B. Xu, Z. Zhong and H. Li, "Research on Dynamic Learning Path Recommendation Based on Social Networks," in IEEE Transactions on Consumer Electronics, doi: 10.1109/TCE.2024.3420772.

RESEARCH EXPERIENCE

Artificial Intelligence and Security   September 2024 - Present

Student Researcher, Supervisor: Professor George C. Polyzos

• Conducted research on performance analysis, evaluation, and optimization of workloads on systems with various GPUs, producing a comprehensive 22-page report summarizing foundational principles and current advancements in the field

• Initiated research in artificial intelligence for security applications, focusing on developing AI techniques to detect malicious software components, while performing a detailed literature review to support further work in this area

Diagnosis of Diabetes Using Large Language Models   May 2024 - September 2024

Student Researcher. Supervisor: Professor David Zhang, Dapeng

• Conducted literature review and improved experimental methods, leveraging large language models (LLMs) for analyzing time-series health data to infer patient health status

• Developed Prompt-based approaches to guide LLMs toward accurate conclusions, using zero-shot or small training datasets for predictive analysis from one-dimensional health data charts; performed over 80 controlled variable experiments, achieving an accuracy rate of over 80%

Learning Path Recommendation Model Developing   December 2023 - May 2024

Researcher. Supervisor: Professor Hui Li

• Developed a dynamic learning path recommendation model using reinforcement learning and social networks, enabling real-time adjustments based on learner preferences and social interactions. Improved recommendation accuracy by 11.61% and recall by 12.5%

• Validated the model with public datasets, enhancing the scalability and adaptability of consumer electronics and smart education systems, while addressing issues like data sparsity and cold start

Freeform Robotics (Modular self-reconfigurable robotic systems)   March 2023 - July 2023

Student Researcher. Supervisor: Professor Tin Lun LAM

• Designed and implemented a power sharing system for robots using STM32, multiplexers, and PMOS/NMOS circuits, optimizing size and thermal performance while addressing battery depletion and short circuit issues

• Developed the robot shell structure with 3D-printed supports and laser-cut plates, ensuring precision and stability for

integrating electric brushes

WORKING EXPERIENCE

School of Data Science, The Chinese University of Hong Kong, Shenzhen   September 2024 - Present

Undergraduate Student Teaching Fellow (USTF)

• Led tutorial sessions for undergraduate students, providing in-depth explanations and guidance on key concepts related to computer and network security, ensuring students grasped complex technical material and could apply it effectively

• Collaborated with the course instructor to optimize course content and structure, offering recommendations for improvement based on student feedback and performance, and assisting in resolving technical issues related to course materials, assignments, and lab sessions

General Office (IT), China Post Lianyungang Postal District Central Bureau   July 2023 - September 2023

Terminal Equipment Maintenance Staff

• Managed and maintained server infrastructure, including overseeing server equipment, allocating sub-servers, and building a reliable server network to ensure smooth operation and connectivity for the organization

• Developed and deployed a web-based terminal for customers of Postal Savings Bank of China using HTML, CSS, and JavaScript, enhancing customer interaction, streamlining services, and improving overall user experience

Jiangsu Ocean University Information Center   May 2021 - August 2021

Terminal Equipment Maintenance Officer

• Provided immediate technical support for electronic devices, diagnosing and resolving hardware and software issues

• Installed, configured, and debugged new equipment, ensuring seamless integration with existing systems and minimizing downtime

ORGANIZATION EXPERIENCE

Fab Lab of CUHK (SZ)   February 2023 - Present

Student Assistant (Laboratory Technician)

• Managed and maintained two 3D printers in the laboratory, ensuring their proper functionality and performing routine maintenance. Modeled and printed over 60 custom products for various academic and research purposes

• Served as a technical staff member during the university's recruitment activities, providing technical support and demonstrations to showcase the lab's capabilities and attract prospective students

CUHK (SZ) Electronic Intelligence Association   December 2022 - February 2024

Minister of Academic Department

• Designed and taught a semester-long Arduino course, covering C++ programming basics and embedded systems, with hands-on projects to reinforce learning

• Developed and led a Raspberry Pi course, focusing on advanced concepts and guiding students in building Raspberry Pi-powered remote-controlled cars, enhancing their skills in robotics and embedded systems

ADDITIONAL

Programming: Python, C, C++, Java, JavaScript, HTML, SQL

Language: Mandarin (native), English (IELTS 7.0)

Other Skills: PCB design, Autodesk Inventor, Keil 5, Photoshop, Premiere

Certificates: Primary First-Aider; achieved a tie for first place in the running challenge during the 6th and 7th Sports Festival at CUHK (SZ); Social Practice Award of Ling College, CUHK (SZ)

Volunteer Experiences: Over 60 hours of volunteer experiences in Shenzhen, China and Toronto, Canada. Including activities such as the "2023 Shenzhen-Hong Kong Youth in Action" at Hong Kong West Kowloon Station, and volunteer services at Shenzhen and Shenzhendong Railway Station during holiday peak periods.