Tony Haolin Li

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Education

08/2024–Present **Ph.D., Computer Science**
Stony Brook University, Stony Brook, NY
Focus: Human-AI Interaction, Generative AI, LLM Agents
Advisor: Xiaojun Bi

08/2020–06/2024 **B.Eng., Computer Science and Technology**
University of Science and Technology of China, Hefei, China
Advisor: Xing-Dong Yang

Publications

Under Review **Li, Tony**, Ma, Y., Li, Z., Yu, C., Ramakrishnan, I., and Bi, X. Keysense: Llm-powered hands-down, ten-finger typing on commodity touchscreens. In *Under Review for CHI'26*, pp. 1–29

CHI'25 Xu, W., **Li, Tony**, Wang, Y., Yang, X.-D., and Wu, T.-Y. Bit: Battery-free, ic-less and wireless smart textile interface and sensing system. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems* (2025), pp. 1–18

VRW'25 Ma, Y., **Li, Tony**, Li, Z., and Bi, X. Llm-powered text entry in virtual reality. In *2025 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)* (2025), IEEE, pp. 1628–1629

CHI EA'25 Xu, W., **Li, Tony**, Wang, Y., Yang, X.-D., and Wu, T.-Y. Demonstrating bit: Battery-free, ic-less and wireless smart textile interface and sensing system. In *Proceedings of the Extended Abstracts of the CHI Conference on Human Factors in Computing Systems* (2025), pp. 1–5

Experience

06/2025–09/2025 Graduate Research Assistant, **Advisor**: Xiaojun Bi, Stony Brook University

- Developed an LLM-powered decoding pipeline that enables hands-down ten-finger typing on commodity touchscreens without additional hardware.

- Fine-tuned FLAN-T5 models on large-scale synthetic and real noisy-to-clean text pairs, achieving significant accuracy gains over Bayesian baselines.

12/2024–03/2025 Graduate Research Assistant, **Advisor**: Xiaojun Bi, Stony Brook University

- Designed an LLM-powered text entry system for Virtual Reality, integrating tap typing and word-gesture typing with raycasting and joystick-based inputs.

- Built a Unity-based VR prototype on Meta Quest Pro, connecting to an LLM decoder deployed on cloud GPUs.

07/2023–04/2024 Research Intern, **Advisor**: Xing-Dong Yang, Simon Fraser University

- Embedded all-textile haptics with SMA material for higher reading rate, parallel computing, and sensitive sensing in textile sensor systems.

- Proposed and evaluated design tools for prototyping all-textile and environmentally friendly haptic systems.

- Developed a textile sensing interface that eliminates ICs, wires and batteries, enabling wireless power transfer and data acquisition on multi-sensor textile circuits.

01/2024–03/2024 Research Intern, **Advisor**: Liang He, Purdue University

- Designed tool guide for 3D printing driven tufting dolls with lattice and guiding marks generation algorithms.

Skills

Programming	C, C++, Python, Java, Verilog HDL, Assembly, SQL, Shell Script
Frameworks	PyTorch, TensorFlow, Android Studio, Django, Flask, Unity
Tools	MySQL, MongoDB, AR/VR Development Tools, 3D Printing, Matlab
Hardware	FPGA/Verilog, Near-field wireless power & data transfer
Fabrication	Circuit Soldering, Sewing Programming (e-textile fabrication), Textile Weaving
Languages	English, Mandarin

Selected Awards

2025	Travel Grant to IEEE VR 2025, Saint Malo, France
2024	USTC Outstanding Undergraduate Thesis Award
2022	USTC Silver Scholarship
2022	Second Prize, The China Mathematics Competitions
2021	Wang Xiaomo Talent Program Scholarship, USTC

Teaching

Spring 2025	Teaching Assistant, CSE 334: Introduction to Multimedia Systems, Stony Brook University, with Prof. Anthony Scarlatos
Fall 2024	Teaching Assistant, CSE 333: User Interface Development, Stony Brook University, with Prof. Anthony Scarlatos