

Teaching Philosophy

My teaching philosophy centers on two principles: 1) *bridging theoretical fundamentals with hands-on practice* and 2) *actively integrating emerging technologies into teaching and learning*. I believe the most effective education happens when students move beyond passive reception of knowledge and engage in solving authentic problems – in the laboratory, in collaborative research, or in partnership with industry. Equally important, I am committed to bringing cutting-edge tools and new ideas into the classroom so that students are prepared for a rapidly evolving technological landscape.

Broad Lecture-Based Teaching Experience

In 2019, my last undergraduate year at Peking University (PKU), I was selected as a teaching assistant for Digital Circuit (04834610), a core undergraduate course in the Department of Electronic Engineering at PKU. The rare appointment as an undergraduate teaching assistant reflected early recognition of my teaching ability.

During my PhD at The Chinese University of Hong Kong (CUHK), I served as a graduate teaching assistant for the following courses:

- Linear Algebra (ENGG1120) in 2021 Spring / 2022 Spring.
- Computer Networks (IERG3310) in 2021 Fall /2023 Fall.
- Basic Analog and Digital Circuits (IERG2060) in 2024 Spring.

This broad range of teaching experiences has well prepared me for teaching across the EE and CS curricula. My years at CUHK have also given me thorough familiarity with the teaching practices, assessment standards, and English-medium instruction of higher education in HK.

Hands-on Laboratory Teaching Experience

Beyond lecture-based courses, I served as a laboratory tutor for the following courses

- Electronic Circuit Design Laboratory (IERG1810) in 2022 Fall/2023 Spring.
- Information and Software Engineering Practice (IERG3080) in 2024 Fall.

In these lab-based courses, I guided students through hands-on circuit construction and software debugging. I found that laboratory teaching cultivates problem-driven thinking that lectures alone cannot provide – learning to diagnose a malfunctioning circuit or trace a bug develops engineering instincts that are essential for professional practice.

Teaching Innovation Supported by UGC Fund

I was a key member of a teaching innovation project funded by the Hong Kong University Grants Committee (UGC) Funding for Innovative Technology in Education (FITE). Our project was executed in 2024-2025 and titled "*An Academia-Industry Collaboration for LLM Education: Hands-on Experiences and Co-Training Opportunities*". I led the proposal writing, project execution, and final reporting. In this project, I brought students out of the classroom to join industry partners, organized joint teaching workshops, and guided students to apply LLM tools to real-world engineering and professional tasks – an initiative with strong pedagogical value at a time when LLMs were just beginning to reshape the field. This experience has given me firsthand expertise in designing and leading innovative educational programs.

Research Mentorship

I have had the honor of advising CUHK final-year project (FYP) students since 2023. Currently, as a postdoctoral fellow, I have taken on a substantial mentorship role. I am now co-supervising 10 PhD students across two research groups at CUHK (the Institute of Network Coding at the IE Department, and the Institute of Medical Intelligence at the CSE Department). Meanwhile, I have also co-advised 9 master's students, 7 research assistants, and 6 FYP students since 2023.

The output of my mentees has been exceptional. PhD students I began supervising in 2024 Fall have each accumulated multiple publications or submissions at top venues, including ACM Mobisys, USENIX OSDI, ICRA, NeurIPS, ICLR, ICCV, Nature Communications, and IEEE Transactions-level journals (TWC, JSAC, TMI, TMLCN, IoTJ). Students who joined in 2025 Fall have already submitted their first papers to leading conferences (IEEE GLOBECOM, ACM Mobisys Demo) within six months. My mentoring involves weekly one-on-one meetings, hands-on guidance on writing and experimental design, and regular group seminars to develop communication skills. This track record demonstrates my ability to supervise undergraduate and postgraduate students.

Future Teaching Plans as Assistant Professor / Research Assistant Professor

With my teaching experience at PKU and CUHK, as well as my highly relevant research background, my teaching ability spans multiple pillars of departmental curricula, including theoretical courses (e.g., computer networks, wireless communications, digital/analog circuits), laboratory courses (e.g., circuit design labs, software engineering practice), and foundational mathematics (e.g., linear algebra, optimization). This gives me the versatility to quickly adapt to and take on a wide range of courses based on the needs of the department. I am equally comfortable teaching introductory courses that serve large undergraduate cohorts.

Beyond existing curricula, I am keen to develop new courses that bring my research expertise into the classroom. One direction is an upper-level elective on the application of generative AI in wireless communication and IoT systems, which would expose senior undergraduates and graduate students to the rapidly evolving intersection of foundation models and engineering system design. The other direction is a broadly accessible, hands-on course that teaches students across engineering disciplines how to effectively leverage LLM tools to accelerate their study, professional workflows, and research productivity — covering topics from prompt engineering and retrieval-augmented generation to building task-specific AI assistants. This course would draw directly on the pedagogy and industry connections I developed through the UGC FITE-funded teaching innovation project, where I organized joint workshops with industry partners and guided students in applying LLM tools to real engineering tasks.

Looking further ahead, I intend to leverage my research expertise in LLM-based autonomous agents to develop a personalized teaching agent that provides students with customized feedback, adaptive learning guidance, and on-demand tutoring support. This system would be integrated into existing university teaching platforms to enhance learning efficiency at scale. The industry partnerships I established through the FITE project, combined with my firsthand experience building agentic AI systems in my research, uniquely position me to lead this effort. I plan to seek funding support through university-level teaching development grants and government funding schemes to bring this vision to fruition.