

Gavin Lou

Biomedical engineer, researcher, and technical founder · Industry resume

Hong Kong | gavinlou@kingsphase.page | <https://github.com/gavinlouuu-kpt> | gavinlouuu.com

Biomedical engineer, postdoctoral researcher, and technical founder building gas-sensing systems, real-time deformability cytometry, computer-vision pipelines, and scientific software.

HK\$3.02M approved across 6 ITCFAS projects	HK\$4.91M public programme value managed	6 peer-reviewed and conference papers	5 patent families and applications
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EXPERIENCE

Postdoctoral Fellow, Biomedical Engineering · The Chinese University of Hong Kong 2023–Present

- Co-developed quantitative imaging-focus control and machine-learning workflows for real-time deformability cytometry.
- Published a review in Advanced Materials and contributed to IEEE NEMS, IEEE-NANOMED, and MicroTAS conference papers.

Founder and CEO · King's Phase Technologies Limited 2019–Present

- Led metal-oxide sensing, portable gas-chromatography, embedded electronics, and breath-analysis projects from prototypes to trials.
- Completed the HKSTP Incu-Tech programme, managed six approved ITCFAS projects, and exhibited at CES 2023 and major Hong Kong technology fairs.

Founder · XY Technologies Limited 2021–Present

- Secured and managed a HK\$600,000 MAKE a DASH funding offer.
- Directed prototype development, supplier coordination, patent work, staffing, and milestone reporting.

Project Manager · Taiyo Optronics 2016–2018

Managed cross-functional technology projects in a manufacturing environment.

Research Assistant · King's College London 2015–2015

Supported research around the European Space Agency's Gravity Loading Countermeasure Skinsuit.

SELECTED RESEARCH, PRODUCTS, AND RECOGNITION

- Published in Advanced Materials and co-authored five IEEE NEMS, IEEE-NANOMED, and MicroTAS conference papers (2023–2026).
- Inventor on four Hong Kong gas-sensing patents/applications and one 2026 US provisional cytometry filing.
- Built public C++/Qt and Python tools for scientific imaging, cytometry segmentation, VOC preparation, and embedded gas sensing.
- CUHK Most Outstanding Star — Innovation & Invention (2019); two awards at the 5th Hong Kong University Student Innovation and Entrepreneurship Competition (2019).

EDUCATION AND TECHNICAL RANGE

PhD, Biomedical Engineering · The Chinese University of Hong Kong 2023

MSc, Biomedical Engineering · The Chinese University of Hong Kong 2019

BSc, Biomedical Science (Physiology), Upper Second-Class Honours · King's College London, University of London 2015

Core: Python · C and C++ · Qt · OpenCV · PyTorch · YOLO and Segment Anything · Embedded systems · Scientific instrumentation · GitHub Actions · Cloudflare Workers