Yuen-Hei Yeung

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Education

Courant Institute of Mathematical Sciences, New York University — New York, United States
Master of Science in Computer Science, CGPA 4.0/4.0 | Coursework: GPU Architecture (Project) — Sep 2024 – May 2026

City University of Hong Kong — Hong Kong S.A.R., China
Bachelor of Science in Computer Science, CGPA 3.52/4.30 — Sep 2018 – May 2022

Research Experience

Agentic Learning AI Lab, NYU Courant Institute — New York, United States
Research Assistant under Prof. Mengye Ren — Dec 2024 – Present

- Working on **self-supervised learning** method on dynamics planning for **imitation learning**

Nvidia AI Technology Center — Hong Kong S.A.R., China
Research Assistant under Prof. Charles K.C. Cheung — Jun 2023 – Aug 2023

- Extended SVD-based **transfer learning** methods for CNNs to transformer-based models on object detection tasks, obtained 2% improvements on top-1 accuracy with 10x fewer parameters than original fine-tuning

Wu Lab, School of Molecular and Cellular Biology, UIUC — Illinois, United States
Research Assistant under Prof. Nicholas C. Wu — Jul 2022 – Dec 2022

- Implemented random forests (PR AUC 67%) in Keras and pre-trained protein-sequence language model e.g. ESM (PR AUC 75%) for 'vaccine antibody-human antigen' binding prediction

Department of Computer Science, City University of Hong Kong — Hong Kong S.A.R., China
Research Assistant under Prof. Rynson W.H. Lau — Apr 2021 – Jun 2022

- Constructed 2 datasets (over 4k images) for 'Transparent Object Detection' with depth maps and semantic segmentation
- Proposed transformer-based model for 'Transparent Object Detection' with 3% improvements against STOA IoU

Manuscripts

Y. Wang, H. Lv, R. Lei, **Y.H. Yeung** et al., *An explainable language model for antibody specificity prediction using curated influenza hemagglutinin antibodies* — Immunity Aug 2024

Y.H. Yeung, Stella X.H. Zhu, George Z.J. Chen et al., *Method for Roadside Sensor Placement Optimization with Reinforcement Learning in Simulation* (submitted to US and China; projected publication date Jul 2025) — Patent Oct 2023

J. Lin*, **Y.H. Yeung***, R. Lau, *Exploiting Semantic Relations for Glass Surface Detection* — NeurIPS Nov 2022

J. Lin*, **Y.H. Yeung***, R. Lau, *Leveraging RGB-Depth with Cross-Modal Context for Glass Surface Detection* — AAAI Jun 2022

Work Experience

Hong Kong Hospital Authority — Hong Kong S.A.R., China
Research Officer in AI & Data Collaboration Lab — Oct 2023 – Aug 2024

- Developed **LLM** applications with **LangChain** that processes 1.2M quarterly medical transactions for over 40 hospitals
- Trained **YOLO**v5 for parasite classification and obtained 98.6% accuracy

Hong Kong Applied Science and Technology Research Institute — Hong Kong S.A.R., China
Engineering Associate in Smart Mobility Technologies Group — Apr 2023 – Oct 2023

- Reproduced academic papers for product development, extended with **patent** invention
- Developed **backend** integration of Smart Mobility simulators (CARLA and SUMO) using **Flask**

Siemens Ltd. — Hong Kong S.A.R., China
Engineer Assistant Intern in Department of Smart Infrastructure — Jun 2020 – Jun 2021

- Built CMS **frontend** for energy consumption monitoring using **Angular**
- Developed automation script for data pre-processing in **Python** (reducing man-days from 30 to 1)

Community & Leaderships

National Academy of Engineering *Graduate*, Grand Challenges Scholars Program — Nov 2022

Google Developer Groups *Core Team Member*, Google Developer Student Club — Sep 2020 – Aug 2021

City University of Hong Kong *Teaching Assistant*, CS2312 Problem Solving and Programming in Java — Sep – Dec 2020

City University of Hong Kong *Mentor*, Student Mentoring Scheme — Sep 2019 – May 2022

City University of Hong Kong 3^{rd} *place*, CityHack (developed crowd counting prototype for seat management) — Jan 2019