Sal Yang

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EDUCATION

Courant Institute of Mathematical Sciences, New York University

Master of Science in Computer Science, CGPA 4.0/4.0 | Coursework: GPU Architecture (Project)

New York, United States 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 Patent Oct 2023 with Reinforcement Learning in Simulation (submitted to US and China; projected publication date Jul 2025)
- 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

Siemens Ltd.

Hong Kong Hospital Authority

Hong Kong S.A.R., China

Oct 2023 – Aug 2024

- Research Officer in AI & Data Collaboration Lab
 - ullet Developed **LLM** applications with **LangChain** that processes 1.2M quarterly medical transactions for over 40 hospitals
 - Trained YOLOv5 for parasite classification and obtained 98.6% accuracy

Hong Kong Applied Science and Technology Research Institute

Hong Kong S.A.R., China

 $\label{thm:engineering} Engineering \ Associate \ \ \text{in Smart Mobility Technologies Group}$

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
- Developed backend integration of Smart Mobiley simulators (CATCLA and SOMO) using Plask

Engineer Assistant Intern in Department of Smart Infrastructure

Hong Kong S.A.R., China 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

Sep-Dec~2020

City University of Hong Kong Mentor, Student Mentoring Scheme

Sep 2019 - May 2022

City University of Hong Kong 3rd place, CityHack (developed crowd counting prototype for seat management)

Jan 2019