

# Yu CAI

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PhD Candidate @ HKUST

Hong Kong SAR, China

## EDUCATION

<b>The Hong Kong University of Science and Technology (HKUST)</b> Pursing Ph.D. in Electronic and Computer Engineering. Advised by Prof. Kwang-Ting Cheng (IEEE Fellow) & Prof. Hao Chen	2022.08 - present CGA: 3.94/4.3
<b>Huazhong University of Science and Technology (HUST)</b> B.Eng. in Electronic and Information Engineering. ( <b>Excellent Engineer Program</b> ) Outstanding Undergraduate Thesis: Research on Unsupervised Anomaly Detection in Chest X-Rays. Advised by Prof. Xin Yang	2018.09 - 2022.06 GPA: 3.93/4.0

## RESEARCH TOPICS

Anomaly Detection in Medical Images; Computational Pathology.

## PUBLICATION

- Yu Cai**, Weiwen Zhang, Hao Chen, Kwang-ting Cheng. “MedIANomaly: A comparative study of anomaly detection in medical images.” *Medical Image Analysis*, 2025. (**MedIA, IF: 10.7**)
- Yu Cai**, Hao Chen, Kwang-ting Cheng. “Rethinking Autoencoders for Medical Anomaly Detection from A Theoretical Perspective.” *The 27th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, 2024.
- Yu Cai**, Hao Chen, Xin Yang, Yu Zhou, Kwang-ting Cheng. “Dual-distribution discrepancy with self-supervised refinement for anomaly detection in medical images.” *Medical Image Analysis*, 2023. (**MedIA, IF: 13.828**)
- Yu Cai**, Hao Chen, Xin Yang, Yu Zhou, Kwang-ting Cheng. “Dual-Distribution Discrepancy for Anomaly Detection in Chest X-Rays.” *The 25th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, 2022. Early Accept (Acceptance rate: 13%).

## COMPETITION

<b>2021 APTOS Big Data Competition</b> Designed a Multiple-Instance Learning (MIL) algorithm for Prediction on DME Patients’ Response to Anti-VEGF Treatment. Ranked 12/10006.	2021.09 - 2021.12
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## TEACHING ASSISTANT

ELEC3120 Computer Communication Networks	Fall 2023
ELEC5680 Advanced Deep Learning Architectures	Spring 2023

## SELECTED AWARDS

HKUST Postgraduate Studentship	2022-2026
HKUST RedBird PhD Award	2022-present
Honours Bachelor Degree ( <b>Top 2%</b> )	2022.06
Outstanding Undergraduate Thesis ( <b>Top 2%</b> )	2022.06
National Scholarship ( <b>Top 2%</b> )	2021.11
National Scholarship ( <b>Top 2%</b> )	2020.11
Outstanding Undergraduate in terms of Academic Performance ( <b>Top 1%</b> )	2020.11