

Hiroki Azuma

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Research Interest

Computer vision (Vision&Laguage, Diffusion models, Recognition models)

Education

2023- MSc, Information and Communication Engineering, *The University of Tokyo*, Japan (supervisor: Yusuke Matsui)

2023 Exchange, Electrical Engineering & Computer Science, *KTH Royal Institute of Technology*, Sweden (supervisor: Atsuto Maki)

2019-2023 BE, Information and Communication Engineering, *The University of Tokyo*, Japan (supervisor: Yusuke Matsui, Kiyoharu Aizawa)

Projects

2023 Development of Human Flow Digital Twins Generated from Camera Images

Accepted for "2023rd MITOU Advanced Program" from Information-technology Promotion Agency (IPA), Japan (Contract price: 14,400,000 yen).

I am in charge of a software development product manager and machine learning model advisor (I couldn't become a regular member due to living abroad). ([Details](#))

2022 Development of a Real-time Visualization and Forecasting System for the Number of Containers and Delay Times at Ports

Passed the first round of "NEDO Supply Chain Data Challenge (2023)" from New Energy and Industrial Technology Development Organization (NEDO). But we did not win in the final competition.

I was responsible for building machine learning models as an image processing engineer. ([Details](#))

Publications

International

[1] [Hiroki Azuma](#), Yusuke Matsui, "Defense-Prefix for Preventing Typographic Attacks on CLIP", In ICCV Workshop, 2023

Domestic (Japan)

[2] [東大樹](#), 松井勇佑, CLIPにおけるタイポグラフィック攻撃を防ぐPrefix学習, In MIRU, Long Oral, 2023

[3] [東大樹](#), 松井勇佑, Typographic attackを防ぐDefense-Prefixの学習, In IEICE General Conference, 2023

Awards

2023 Best Paper Award @ICCV2023 Workshop

2023 Best Student Paper Award @MIRU2023

Internship

2022.4 ~ [Function](#)

Fullstack software development (Next.js, Python, Terraform, GCP) / Image processing with object detection models (Pytorch)

2023.1 ~ 2023.7 [mutex](#)

Development of retrieval systems using large language models (Python)

2022.11 ~ 2023.1 [cellid](#)

Improvement of the performance about 3D reconstruction with SfM (Python)

2021.8 ~ 2021.9 [cocone](#)

Backend, API development (Java)