Chi-Hsuan Wu

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Education

University of Texas at Austin Sep. 2024 - Present
M.S. Computer Science *USA*
- Research advisor: Prof. Kristen Grauman
- GPA: 3.89/4.0

Hong Kong University of Science and Technology Sep. 2019 - Jun. 2023
Double major in B.S. Data Science and B.S. Computer Science *Hong Kong*
- Research advisor: Prof. Tim Kwang-Ting Cheng
- GPA: 3.90/4.30 (**Top 2%**, Academic Achievement Medal)

École Polytechnique Fédérale de Lausanne Feb. 2022 - Aug. 2022
Exchange student *Switzerland*
- Research advisor: Prof. Matthias Glossglauser

Research Experience

Graduate Research Assistant - UT Austin Computer Vision Group Aug. 2024 – Present
Advisor: Prof. Kristen Grauman *Austin, USA*
- Researched efficient first-person skill assessment using only gaze signals; distilled visual cues into a gaze-only model that achieved strong accuracy with 73% lower power consumption.
- Researched procedural step visualization in multistep instructional videos via coherent clip sequence retrieval; leveraged hard negatives and LLM-generated pseudo-labels to enforce object-state and temporal consistency.

Research Assistant - Academia Sinica Nov. 2023 – Jan. 2024
Advisor: Prof. Jen-Chun Lin *Taiwan*
- Researched human pose estimation and uncertainty estimation from monocular video.

Bachelor Thesis Student - HKUST Vision and System Design Lab Sep. 2022 – Sep. 2023
Advisor: Prof. Tim Kwang-Ting Cheng *Hong Kong*
- Researched student engagement from webcam video and released a dataset with industry collaborators.
- Designed a rank-based training objective to address label noise and ordinal nature of engagement prediction.

Research Assistant & **Student Researcher - EPFL INDY Lab** Feb. 2022 – Aug. 2022
Advisor: Prof. Matthias Grossglauser *Switzerland*
- Researched interpretable biased article classification.
- Mined biased/neutral Wikipedia article pairs and designed a context-aware model that identifies biased segments.

Publications and Preprints

SkillSight: Efficient First-Person Skill Assessment with Gaze
Chi-hsuan Wu, Kumar Ashutosh, Kristen Grauman
arXiv 2025, [arXiv] [Project Page]

Stitch-a-Demo: Video Demonstrations from Multistep Descriptions
Chi-hsuan Wu*, Kumar Ashutosh*, Kristen Grauman
arXiv 2025, [arXiv] [Project Page]

CMOSE: Comprehensive Multi-Modality Online Student Engagement Dataset
Chi-hsuan Wu, Shih-yang Liu, Xijie Huang, Xingbo Wang, Rong Zhang, Luca Minciullo, ..., Kwang-Ting Cheng
CVPR Affective & Behavior Analysis in-the-wild Workshop 2024, [arXiv] [Project Page]

It's All Relative: Interpretable Models for Scoring Bias in Documents
Aswin Suresh, **Chi-hsuan Wu**, Matthias Grossglauser
The European Chapter of the ACL (EACL) 2024, [arXiv]

Selected Projects

3D Human Mesh Reconstruction from Monocular Videos Nov. 2023 to Mar. 2024
Computer Vision Project *Taiwan*

- Designed a transformer with dilated attention to improve pose estimation under rapid motion changes.
- Incorporated uncertainty prediction for practical use and reduced estimation error by **5%**.

Day Night Transformation to Improve Feature Matching Sep. 2021 – Dec. 2021
Computer Vision Project, [pdf][code] *Hong Kong*

- Developed CycleGAN model to transform illumination and improve feature matching of day-night images pair.
- Designed loss to improve image quality and training stability. Increased high-confidence feature matching by **13%**.

ExamPal Nov. 2020 to Dec. 2021
Startup Project *Hong Kong*

- Led development of an online learning platform prototype and presented at multiple entrepreneurship events.
- Selected for and **funded by the Hong Kong Science and Technology Park Incubation Programme**.

Teaching and Volunteering Experience

Peer Mentor - HKUST School of Science Sep. 2021 - Jun. 2022

- Led math tutorial sessions and advised 20 incoming students on course selection and major planning.

Web Developer - Entrepreneurship Center Student Group Sep. 2021 - Jun. 2022

- Built the Entrepreneurship Center website and organized entrepreneurship outreach events.

DevOps Engineer - HKUST Campus Map Application Sep. 2021 - Dec. 2021

- Implemented CI/CD pipeline with GitAction and collaborated with a 10-member software team.

Selected Awards

Academic Achievement Medal (**Top 2%** of all HKUST graduates)	2023
Dean's List Award (6 semesters, GPA$>$ 3.7)	2019-2023
Continuing Undergraduate Scholarship (**Top 10%** university-wide, awarded 3 times)	2020-2023
HKSAR Reaching Out Award	2022
Lee Hysan Foundation Exchange Scholarship	2022

Skills and Extracurricular Activities

Programming Languages and Tools

- Python, C++, Pytorch, OpenCV, Git, Gitaction, Docker

Extracurricular Activities

- JP Morgan Chase Code for Good Finalist (**top 4** out of 40 teams)
- HK Techathon Finalist (**top 15** out of 167 teams)
- HKUST Business School Topic Modeling Student Helper