Fuwen TAN

CONTACT fuwen.tan@gmail.com https://fwtan.github.io/

SUMMARY I'm a researcher in Efficient Machine Learning, focusing on lightweight models, data-efficient learning, and on-device AI. My work aims to make machine learning more practical and accessible for real-world applications.

RESEARCH

MobileQuant: Mobile-friendly Quantization for On-device Language Models
Fuwen Tan, Royson Lee, Lukasz Dudziak, Shell Xu Hu, Sourav Bhattacharya, Timothy Hospedales, Georgios Tzimiropoulos, Brais Martinez
Conf. on Empirical Methods in Natural Language Processing, **EMNLP Findings**, 2024

Effective Self-supervised Pre-training on Low-compute Networks without Distillation
Fuwen Tan, Fatemeh Saleh, Brais Martinez
International Conference on Learning Representations (**ICLR**), 2023

iBoot: Image-bootstrapped Self-Supervised Video Representation Learning
Fatemeh Saleh, **Fuwen Tan**, Adrian Bulat, Georgios Tzimiropoulos, Brais Martinez
Arxiv, 2022

EdgeViTs: Competing Light-weight CNNs on Mobile Devices with Vision Transformers
Junting Pan, Adrian Bulat, **Fuwen Tan**, Xiatian Zhu, Lukasz Dudziak, Hongsheng Li, Georgios Tzimiropoulos, Brais Martinez
European Conference on Computer Vision (**ECCV**), 2022

Instance-level Image Retrieval using Reranking Transformers
Fuwen Tan, Jiangbo Yuan, Vicente Ordonez
International Conference on Computer Vision (**ICCV**), 2021

Curriculum Labeling: Self-paced Pseudo-Labeling for Semi-Supervised Learning
Paola Cascante-Bonilla, **Fuwen Tan**, Yanjun Qi, Vicente Ordonez
AAAI Conference on Artificial Intelligence. (**AAAI**), 2021

Drill-down: Interactive Retrieval of Complex Scenes using Natural Language Queries
Fuwen Tan, Paola Cascante-Bonilla, Xiaoxiao Guo, Hui Wu, Song Feng, Vicente Ordonez
Conf. on Neural Information Processing Systems (**NeurIPS**), 2019

Text2Scene: Generating Compositional Scenes from Textual Descriptions
Fuwen Tan, Song Feng, Vicente Ordonez
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2019, **Oral**, **Best Paper Finalist**

Where and Who? Automatic Semantic-Aware Person Composition
Fuwen Tan, Crispin Bernier, Benjamin Cohen, Vicente Ordonez, Connelly Barnes
Winter Conference on Applications of Computer Vision (**WACV**), 2018

FaceCollage: A Rapidly Deployable System for Real-time Head Reconstruction for On-The-Go 3D Telepresence
Fuwen Tan, Chi-Wing Fu, Teng Deng, Jianfei Cai, Tat Jen Cham
ACM Multimedia (**ACM MM, full paper**), 2017

High-Quality Kinect Depth Filtering For Real-time 3D Telepresence

Mengyao Zhao, **Fuwen Tan**, Chi-Wing Fu, Chi-Keung Tang, Jianfei Cai, Tat Jen Cham
Conf. on Multimedia and Expo (**ICME**), 2013

Field-Guided Registration for Feature-Conforming Shape Composition
Hui Huang, Minglun Gong, Daniel Cohen-Or, Yaobin Ouyang, **Fuwen Tan**, Hao Zhang
SIGGRAPH Asia, 2012

Education

University of Virginia — Charlottesville, United States
Ph.D. in Computer Science — Aug.2015 - May.2021
Advisor: Vicente Ordóñez Román

Zhejiang University — Hangzhou, China
M.S.in Mathematics — Sep.2010 - Jun.2012

Sun Yat-sen University — Guangzhou, China
B.S. in Mathematics — Sep.2006 - Jun.2010

Experience

Samsung AI Center, Cambridge, United Kingdom — June.2021 - Present
Researcher at the Future Interaction Team
R&D on Vision & Language, and on-device LLMs.

Nanyang Technological University, Singapore — Aug.2012 - Jul.2015
Research Associate at the BeingThere Centre, Institute for Media Innovation
Design and implement a low-cost, fast and realistic system for personal 3D telepresence.

Service

Program Committee
Siggraph Asia 2024 (Technical Communications & Posters)

Reviewer
Computer Vision: CVPR (Outstanding Reviewer), ICCV, ECCV(Outstanding Reviewer), PAMI
Machine Learning: NeurIPS, ICLR, ICML(Outstanding Reviewer), AAAI, IJCAI
Natural Language Processing: EMNLP