Fuwen TAN

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SUMMARY I'm a researcher in Efficient Machine Learning, specializing in lightweight models, data-efficient learning, and on-device AI.

PUBLICATION

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

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 presentation**
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

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

Bytedance, United States — Jan., 2025 - Present
R&D in Efficient Machine Learning

Samsung AI Center, Cambridge, United Kingdom — Jun., 2021 - Jan., 2025
R&D in Efficient Machine Learning

Nanyang Technological University, Singapore — Aug.2012 - Jul.2015
R&D in 3D Telepresence

Talks

Toward Efficient On-device AI: the Model, the Training, and the Deployment
University of Surrey, November 2024

Service

Program Committee
Siggraph Asia 2024 (Technical Communications & Posters)

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

Awards

Computer Vision and Pattern Recognition (**CVPR**) **Best Paper Finalist** 2019
European Conference on Computer Vision (**ECCV**) Outstanding Reviewer 2020
Computer Vision and Pattern Recognition (**CVPR**) Outstanding Reviewer 2021
International Conference on Machine Learning (**ICML**) Outstanding Reviewer 2022