# Junwu Weng

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Research Interest Computer Vision & Computer Graphics Video Understanding, Pose Estimation, 3D Motion Retargeting, Content Generation

### **Education**

**Ph.D. in Electrical and Electronic Engineering**Nanyang Technological University

Aug 2015 - May 2020
Singapore

Advisor: Prof. Junsong Yuan, Prof. Xudong Jiang

M.Phil. in Signal and Information ProcessingSep 2012 - July 2015South China University of TechnologyGuangzhou, China

Advisor: Prof. Xiangmin Xu

**B.Eng. in Information Engineering** - *Talented Student Program*South China University of Technology
Sep 2008 - July 2012
Guangzhou, China

## **Experience**

#### **Tencent - Senior Researcher**

May 2020 - Present

Tencent AI Lab, Shenzhen, China

- Pre-training for Temporal Action Localization and Visual-language Modeling: CVPR'22, ECCV'22
- Learning from Noisy Label for Video Classification: AAAI'23
- 3D Motion Retargeting, Pose Estimation, Unsupervised Learning

## Tencent - Research Intern

Sep 2019 - May 2020

Tencent Youtu Lab / Tencent AI Lab, Shanghai / Shenzhen, China

• Video Understanding and Neural Network Design: ECCV'20

#### Microsoft Research Asia - Visiting Fellow (Research Intern)

Jun 2018 - Nov 2018

MSRA Internet Media Group, Beijing, China

- 3D Online Human Action Recognition from 3D action stream
- Supervisor: Dr. Cuiling Lan, Prof. Wenjun Zeng

## **Publications**

- Zixiao Wang, **Junwu Weng**, Chun Yuan, Jue Wang: *Truncate-Split-Contrast: A Framework for Learning from Mislabeled Videos*. in Proceedings of the AAAI Conference on Artificial Intelligence (*AAAI*), 2023
- Meng Cao, Tianyu Yang, Junwu Weng, Can Zhang, Jue Wang, Yuexian Zou: LocVTP: Video-Text Pre-training for Temporal Localization. in European Conference on Computer Vision (ECCV), 2022
- Can Zhang, Tianyu Yang, **Junwu Weng**, Meng Cao, Jue Wang, Yuexian Zou: *Unsupervised Pre-training for Temporal Action Localization Tasks*. in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (*CVPR*), 2022
- Junwu Weng, Donghao Luo, Yabiao Wang, Ying Tai, Chengjie Wang, Jilin Li, Feiyue Huang, Xudong Jiang, Junsong Yuan: *Temporal Distinct Representation Learning for Action Recognition*. in European Conference on Computer Vision (*ECCV*), 2020
- Junwu Weng, Xudong Jiang, Wei-Long Zheng, Junsong Yuan: Early Action Recognition with Category Exclusion using Policy-based Reinforcement Learning. in IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT), 2020

- **Junwu Weng**, Chaoqun Weng, Junsong Yuan, Zicheng Liu: *Discriminative Spatio-Temporal Pattern Discovery for 3D Action Recognition*. in IEEE Transactions on Circuits and Systems for Video Technology (*T-CSVT*), 2018
- Junwu Weng, Mengyuan Liu, Xudong Jiang, Junsong Yuan: *Deformable Pose Traversal Convolution for 3D Action and Gesture Recognition.* in European Conference on Computer Vision (*ECCV'18*), 2018
- Liuhao Ge, Yujun Cai, **Junwu Weng**, Junsong Yuan: *Hand PointNet: 3D Hand Pose Estimation using Point Sets.* in Proc. IEEE Conf. on Computer Vision and Pattern Recognition (*CVPR'18*), 2018 [ **Spotlight** ]
- Junwu Weng, Chaoqun Weng, Junsong Yuan: Spatio-Temporal Naïve-Bayes Nearest Neighbor for Skeleton-Based Action Recognition. in Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'17), 2017

## **Honor & Award**

• Ph.D. Research Scholarship, Nanyang Technological University, Singapore	2015 - 2019
• Third Place in Hands In the Million Challenge (HIM2017)	Oct 2017
• National Graduate Student Scholarship (top 3%), Ministry of Education, China	2013 - 2014
• Second Prize in National Post-Graduate Mathematical Contest in Modeling, CDGDC, China	Oct 2013
• First Prize Graduate Student Scholarship, South China Univ. of Tech., China	2012 - 2013

## **Services**

• TPC for Multi-Sensor for Action and Gesture Recognition of ACPR Workshops	Nov 2019
• Teaching Assistant of IM1002 Analog Electronics ( <i>Lab</i> )	Spring 2018
• Teaching Assistant of IM2073 Mobile Programming (Lab)	Spring 2018
• Teaching Assistant of Foundations of Data Science and Machine Learning in Python ( <i>Tutorial</i> )	Fall 2017
$ullet$ Organizing Committee of $4^{th}$ International Teochew Doctoral Forum	Nov 2016

- Reviewer of Journal TPAMI, TIP, TCSVT, TNNLS, TMM, PR, TVCJ, JVCI
- Reviewer of Conference CVPR, ICCV, ECCV, NeurIPS, ICLR, AAAI

## **Skills**

Programming C/C++, Matlab, Python (PyTorch), MT<sub>E</sub>X, HTML/CSS Language Chinese Mandarin (native), English (fluent)