Jie(Jay) Mei

Department of Electrical & Computer Engineering
University of Washington, Seattle, USA
Homepage | Email | Linkedin

Education

University of Washington (UW) Seattle, USA
Ph.D. in Electrical & Computer Engineering, Advisor: Prof. Jenq-Neng Hwang Expected 2023
- Selected Courses: Deep Learning, Computer Vision, Statistical Learning, Natural Language Processing, AI for Engineers

Beijing Institute of Technology (BIT) Beijing, China
B.Eng. in Electrical Information Engineering Sep 2015 – Jun 2019
- **Elite Class**, Major: Signal and Image Processing (GPA: 4.0/4.0, Rank: 1/112)

University of California, Los Angeles (UCLA) Los Angeles, USA
Visiting Research Student in Computer Science Jul – Sep 2018
- Nationwide **10 percent** acceptance rate based on grades and research performance, Cross-disciplinary Scholars in Science and Technology Program (GPA: 4.0/4.0)

Hong Kong University of Science and Technology Hong Kong, China
Exchange Student in Computer Science & Engineering Jun – Aug 2017
- Courses: Introduction to Electro-Robot Design, Python (GPA: 4.3/4.3)

Publications

1. **Jie Mei**, Jenq-Neng Hwang, Suzanne Romain, Craig Rose, Braden Moore, Kelsey Magrane, "Absolute 3D Pose Estimation and Length Measurement of Severely Deformed Fish from Monocular Videos in Longline Fishing," IEEE ICASSP 2021, Toronto, Ontario, Canada, June 2021 (PDF)
2. **Jie Mei**, Jenq-Neng Hwang, Suzanne Romain, Craig Rose, Braden Moore, Kelsey Magrane, "Video-based Hierarchical Species Classification for Longline Fishing Monitoring," the 4th Computer Vision for Automated Analysis of Underwater Imagery Workshop (CVAUI), ICPR 2020, Milan Italy, Jan. 2021 (PDF)

Research Experience

Information Processing Lab, UW (Homepage) Seattle, USA
Research Assistant, Advisor: Jenq-Neng Hwang, Professor In Progress
Video-Based Self-Supervised 3D Shape Reconstruction
- Implemented and analyzed self-supervised approaches: GAN on sampled/interpolated novel shape embedding, self-consistency/content loss, assign semantic meaning for each vertex, enforced symmetry.
- Implemented and analyzed video-based approaches: optical flow pseudo ground truth, linear-blend skinning for deformation modeling.

Information Processing Lab, UW Seattle, USA
Team Leader, Advisor: Jenq-Neng Hwang, Professor Aug-Sep 2021
Segmenting and Tracking Every Point and Pixel: Benchmarking Multi-Target Tracking (ICCV Workshop 2021)
- Built an end-to-end anchor-free panoptic segmentation model with instance tracking.

Computer Graphics & Vision Laboratory, UCLA Los Angeles, USA
Research Assistant, Advisor: Demetri Terzopoulos, Distinguished Professor Jul – Oct 2018
An Auto-initialization Pipeline for Medical Image Segmentation with Active Contour Model

- Built a unified auto-initialization pipeline for three organs for active contour model (ACM). This pipeline eliminated the need for doctors to click on a medical image. As a result, ACM can do lesion segmentation automatically without human intervention.

Computer Vision Group, Tsinghua University Beijing, China
Research Assistant, Advisor: Shengjin Wang, Professor Sep 2017 – Nov 2018
Temporal Processing in Gait Recognition (State Key Development Program in 13th Five-Year)

- Improved the original model, 'deep recurrent convolutional networks for video-based person re-identification'. New model is more suitable for person re-identification in real-world crowded scenarios.

Internship

Image and Video Group, Megvii Beijing, China
SDE Intern, Advisor: Chi Zhang, Principal Scientist Jun – Sep 2019
Task: Few-Shot Learning for Detection

Selected Awards & Honors

- Principal Xu-Teli Scholarship, BIT 2017
  The highest honor in Beijing Institute of Technology. Only 9 students were awarded among all undergraduates based on research performance.
- National Scholarship, China 2016 & 2107
  Top 1 in academic performance in School of Electronic Engineering in BIT.
- Second-Class Award in China, National College Students Physics Contest 2016
  Top 5 percent national wide.
- First-Class Award in Beijing, National College Students Mathematical Modeling Contest2016
  Top 5 percent national wide.

Computer Skills

- Proficient in Python, Matlab, C++, C
- Skilled in deep learning framework: PyTorch, TensorFlow
- Online courses on Coursera platform:

  Machine Learning, provided by Stanford University (score: 98/100)
  Course certificate December 2, 2017 PDF

  Deep Learning, provided by deeplearning.ai, given by Prof. Andrew Ng
  Consisting of 5 interconnected modules: Convolutional Neural Networks (score: 100/100), Sequence Model (score: 100/100), Neural Networks and Deep Learning (score: 100/100), Structuring Machine Learning Projects (score: 96.7/100), Improving Deep Neural Networks (score: 100/100).
  Course certificate April 29, 2018 PDF

Social Activities

- **Pen Pal Program**, UW Sep – Dec 2019
  Writing letter to local elementary students to inspire their willing to college.
- **Class Representative**, BIT Oct 2016 – Jun 2019
  Organized all class activities such as volunteer activities. My class was awarded one of two 'Outstanding Class' awards out of 45 classes in 2018 based on community involvement.
- **Leader of International Volunteers**, Sri Lanka Jul – Aug 2016
  Led eleven international volunteers to teach English in primary school and take care of endangered elephants in Sri Lanka including bathing them and preparing food.