

# Jie(Jay) Mei

Department of Electrical & Computer Engineering

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## Education

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### University of Washington (UW)

Seattle, USA

Ph.D. in Electrical & Computer Engineering, Advisor: Prof. [Jenq-Neng Hwang](#) Expected Aug 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

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- 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](#))
- 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

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### Information Processing Lab, UW ([Homepage](#))

Seattle, USA

Research Assistant, Advisor: Jenq-Neng Hwang, Professor

In Progress

#### Semantic-Guided Self-Supervised 3D Shape Reconstruction from Videos

- 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

Research Assistant, Advisor: Jenq-Neng Hwang, Professor

Aug-Oct 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 13<sup>th</sup> 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

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### 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

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- 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 Contest 2016  
**Top 5** percent national wide.

## Computer Skills

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- Proficient in Python, Matlab, C++, C, Lua
- 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

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- **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.