Weinan Song

wsong@ucla.edu | waynesoong.github.io | Google Scholar

Summary

I am a Ph.D. candidate at UCLA ECE department under the supervision of Professor Lei He and co-advised by Yingnian Wu from the Stats department. My research interests primarily focus on the field of **Deep Generative Models**. Specifically, my work involves developing efficient and integrated deep generative techniques for cross-domain translation and 3D reconstruction from cross-modality images. I am also interested in cutting-edge methods for high-resolution image generation by adversarial learning, score learning, and energy-based models.

Education

University of California, Los Angeles — *Los Angeles, USA*
PhD student in Electrical & Computer Engineering — *Sep. 2017 - Present*

Peking University — *Beijing, China*
B.S. in Electrical Engineering & Computer Science Department — *Sep. 2013 - July. 2017*

Selected Publications

- **Progressive Energy-Based Cooperative Learning for Multi-Domain Image-to-Image Translation.**
  Weinan Song, *Yaxuan Zhu, Lei He, Yingnian Wu, Jianwen Xie* in submission of Nips 2023
- **MDT-Net: Multi-domain Transfer by Perceptual Supervision for Unpaired Images in OCT Scan**
  Weinan Song, *Gaurav Fotedar, Nima Tajbakhsh, Ziheng Zhou, Lei He, and Xiaowei Ding* in ISBI 2023
- **Oral-3D: Reconstructing the 3D Structure of Oral Cavity from Panoramic X-ray.**
  Weinan Song, *Yuan Liang, Jiawei Yang, Kun Wang, and Lei He* in AAAI 2021
- **X2Teeth: 3D Teeth Reconstruction from a Single Panoramic Radiograph.**
  Yuan Liang, ***Weinan Song***, *Jiawei Yang, Liang Qiu, Kun Wang, and Lei He* in MICCAI 2020
- **CompareNet: Anatomical Segmentation Network with Deep Non-local Label Fusion.**
  Yuan Liang, ***Weinan Song***, *JP Dym, Kun Wang, and Lei He* in MICCAI 2019
- **Accelerating Binarized Convolutional Neural Networks with Software-Programmable FPGAs.**
  Ritchie Zhao, ***Weinan Song***, *Wentao Zhang, Tianwei Xing, Jeng-Hau Lin, Mani Srivastava, Rajesh Gupta, Zhiru Zhang* in FPGA 2017

Research&Working Experience

Design Automation Laboratory, University of California, Los Angeles
Research Assistant, advised by *Prof. Lei He* — *Sep. 2017 - Present*
- Efficient Data Exploitation by Deep Learning Models

Google, Kirkland
SWE Intern, advised by *Ian Guan* — *Summer 2023*
- Support data analysis with gradient-boosted trees model in Big Query service

Meta (Facebook), Menlo Park
MLE Intern at Recommendation Core ML, advised by *Dr. Xiaoyi Liu* — *Summer 2022*
- Build ModelTracer for deep learning performance tracing and optimize UHM in Reel's recommendation system.

Google, Mountain View
SWE Intern, advised by *Dr. Peng Wei* — *Summer 2021*
- Build analysis tool for flow bandwidth estimation in Google networks

VoxelCloud Inc, Los Angeles
Research Intern, advised by *Dr. Nima Tajbakhsh* — *June. 2020 - June. 2021*
- Deep Generative Models for Medical Images

Center for Energy-Efficient Computing and Applications, Peking University
Research Assistant, advised by *Prof. Guangyu Sun* — *Sep. 2016 - July. 2017*
- Acceleration and Quantization of Convolution Neural Networks on Hardware Platforms

Computer Systems Laboratory, Cornell University
Research Intern, advised by *Prof. Zhiru Zhang* — *Summer 2016*
- Accelerating Binarized Convolution Neural Networks on FPGAs

Review Service

Medical Image Computing and Computer Assisted Intervention (MICCAI)	2022/2023
International Conference on Learning Representations (ICLR)	2023
Conference on Computer Vision and Pattern Recognition (CVPR)	2023
International Joint Conference on Artificial Intelligence (IJCAI)	2023
International Conference on Machine Learning (ICML)	2023
Neural Information Processing Systems (NIPS)	2023

Honors

Dissertation Year Fellowship	*University of California, Los Angeles*	2023
Notable Reviewer	*ICLR*	2023
Outstanding Reviewer	*CVPR*	2023
Graduate Division Fellowship	*University of California, Los Angeles*	2017
Youth Fellowship	*Peking University*	2016
Panasonic Yuying Fellowship	*Peking University*	2015