Weinan Song

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Summary

I have been a PhD candidate at UCLA under the supervision of Professor Lei He in the ECE department and Professor Yingnian Wu in the Stats department. My research interests primarily focus on the field of **Deep Generative Models in Medical Imaging**. Specifically, my work involves developing efficient and integrated deep generative techniques for cross-domain and cross-modality image translation, particularly for biomedical images. I am particularly interested in exploring cutting-edge unsupervised generative approaches, such as adversarial learning, MCMC teaching, and score learning.

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

- **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
- **T-Net: A Template-Supervised Network for Effective Feature Extraction in Biomedical Image Analysis.**
  ***Weinan Song**, Yuan Liang, Jiawei Yang, Kun Wang, and Lei He* in ISBI 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

Meta (Facebook), Menlo Park
MLE Intern at Recommendation Core ML, advised by *Dr. Xiaoyi Liu* — *Summer 2022*
- Optimizing User History Embedding Model for Facebook Reel Recommendation System

Google, Mountain View
SWE Intern, advised by *Dr. Peng Wei* — *Summer 2021*
- Flow Bandwidth Statistics for Google Cloud Services

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

Professional Service

Teaching Assistant for Computational Methods for Medical Imaging (CS168)	2019
Peer Review for Medical Image Computing and Computer Assisted Intervention (MICCAI)	2022
Peer Review for International Conference on Learning Representations (ICLR)	2023
Peer Review for Conference on Computer Vision and Pattern Recognition (CVPR)	2023
Peer Review for International Joint Conference on Artificial Intelligence (IJCAI)	2023
Peer Review for International Conference on Machine Learning (ICML)	2023