Xin Chen

Personal Information

E-mail: xinchen.hawaii@gmail.com

Homepage: https://xinchenhawaii.github.io/

Google Scholar: http://scholar.google.com/citations?user=bNou80wAAAAJ

Research Interests

Computer Vision, LLM, Deep Learning, Efficient AI, Generative AI, and AI Infra.

Education

Ph. D University of Hawaii at Manoa, Honolulu, HI, 2007

MSEE Hefei University of Technology, Hefei, Anhui, China, 2003

Professional Experience

Machine Learning Software Engineer (Senior Staff), Intel Corp., Santa Clara, CA 10/2021 - present

Principal Research Scientist, Kuaishou Technology, Palo Alto, CA 5/2019 - 10/2021

Sr. Software Engineer-Computer Vision, Petuum Inc., Sunnyvale, CA 11/2018 - 5/2019

Emerging Technology Center, Midea Group, San Jose, CA 8/2016 - 11/2018

- *Staff AI Engineer & Sr. Manager of AI Platform* 4/2017 - 11/2018
- *Sr. AI Engineer* 8/2016 - 3/2017

Principal Engineer, NovuMind, Santa Clara, CA 9/2015 - 8/2016

Senior Software Engineer, Hermes Microvision Inc., San Jose, CA 12/2012 - 8/2015

Imaging Scientist, Konica Minolta System USA Lab, San Mateo, CA 11/2011 - 8/2012

Video Engineer, Fairchild Imaging, Milpitas, CA, 6/2009 - 5/2010

Research Intern, Nvidia Crop., Santa Clara, CA 10/2007 - 2/2008

Academic Appointments

Assistant Computer Scientist,
Department of Radiology,
Massachusetts General Hospital, Boston, MA 10/2010 - 9/2011

Instructor (Research Faculty),
Harvard Medical School, Boston, MA 10/2010 - 9/2011

Research Associate,
Department of Radiology & Biomedical Imaging
University of California at San Francisco, San Francisco, CA 3/2008 - 5/2009

Publications

(* equal contribution and ‡ corresponding author)

Peer-Reviewed Conference Papers

[C1] Yimeng Zhang, **Xin Chen**, Jinghan Jia, Yihua Zhang, Chongyu Fan, Jiancheng Liu, Mingyi Hong, Ke Ding and Sijia Liu, "*Defensive Unlearning with Adversarial Training for Robust Concept Erasure in Diffusion Models*", NIPS 2024.

[C2] Hanxian Huang, Zhenghan Lin, Zixuan Wang, **Xin Chen**, Ke Ding, and Jishen Zhao," *Towards LLM-Powered Verilog RTL Assistant: Self-Verification and Self-Correction*", Appeared at Hot Chips 2024 Tutorial on AI Assisted Hardware Design.

[C3] Yimeng Zhang, Jinghan Jia, **Xin Chen**, Aochuan Chen, Yihua Zhang, Jiancheng Liu, Ke Ding and Sijia Liu, "*To Generate or Not? Safety-Driven Unlearned Diffusion Models Are Still Easy To Generate Unsafe Images... For Now*", ECCV 2024

[C4] **Xin Chen**, Hanxian Huang,Yanjun Gao, Yi Wang, Jishen Zhao, Ke Ding, "*Learning to Maximize Mutual Information for Chain-of-Thought Distillation*", The 62nd Annual Meeting of the Association for Computational Linguistics (ACL) Findings, 2024.

[C5] Hanxian Huang, **Xin Chen**, Jishen Zhao, "*Fasor: A Fast Tensor Program Optimization Framework for Efficient DNN Deployment*", International Conference on Supercomputing, 2024.

[C6] Linfeng Zhang, **Xin Chen**, Runpei Dong, Kaisheng Ma, "*Region-aware Knowledge Distillation for Efficient Image-to-Image Translation*", BMVC 2023.

[C7] Yimeng Zhang, **Xin Chen**, Jinghan Jia, Sijia Liu, Ke Ding, "*Text-Visual Prompting for Efficient 2D Temporal Video Grounding*", IEEE CVPR 2023.

[C8] Linfeng Zhang, **Xin Chen**,Junbo Zhang, Runpei Dong, Kaisheng Ma, "*Contrastive Deep Supervision*", ECCV 2022 (Oral, 2.7% acceptable ratio).

[C9] Yanyu Li, Pu Zhao, Geng Yuan, Xue Lin, Yanzhi Wang, **Xin Chen**‡, "*Pruning-as-Search: Efficient Neural Architecture Search via Automatic Channel Pruning and Structural Reparameterization*", IJCAI-ECAI 2022.

[C10] Linfeng Zhang, **Xin Chen**, Xiaobing Tu, Pengfei Wan, Ning Xu, Kaisheng Ma, "*Wavelet Knowledge Distillation: Towards Efficient Image-to-Image Translation*", IEEE CVPR 2022.

[C11] Miao Liu, **Xin Chen**, Yun Zhang, Yin Li, James M Rehg, "*Attention Distillation for Learning Video Representations*", BMVC 2020 (Oral, 5% acceptable ratio).

[C12] Mingze Xu, Aidean Sharghi, **Xin Chen**‡,and David J Crandall, "*Fully-Coupled Two-Stream Spatiotemporal Networks for Extremely Low Resolution Action Recognition*", IEEE WACV 2018.

[C13] **Xin Chen**, Emma Marriott, and Yuling Yan, "*Motion Saliency Based Automatic Delineation of Glottis Contour in High-speed Digital Images*", IEEE Industrial Electronics and Applications (ICIEA), 2017.

[C14] **Xin Chen**, Diane Bless, and Yuling Yan, "*A Segmentation Scheme Based on Rayleigh Distribution Model for Extracting GAW from High-speed Laryngeal Image Sequence*", IEEE EMBS 2005.

[C15] Yuling Yan, Diane Bless, and **Xin Chen**,"*Biomedical Image Analysis in High-speed Laryngeal Imaging of Voice Production*", IEEE EMBS, 2005.

[C16] Yuling Yan, **Xin Chen**, Kartini Ahmad, and Diane Bless,"*High-speed Laryngeal Imaging Analysis of Vocal Fold Dynamics*", International Conference on Voice Physiology and Biomechanics - Marseille - August 18-20, 2004.

Journal Papers

[J1] Guibo Luo, Tianyu Liu, Jinghui Lu, **Xin Chen**, Lequan Yu, Jian Wu, Danny Z. Chen, Wenli Cai, "*Influence of Data Distribution on Federated Learning Performance in Tumor Segmentation*", Radiology: Artificial Intelligence, April 2023.

[J2] Heyi Li, Yunke Tian, Klaus Mueller, and **Xin Chen**[‡], "*Beyond saliency: understanding convolutional neural networks from saliency prediction on layer-wise relevance propagation*", Image and Vision Computing, Vol. 83, Page 70-86, 2018.

[J3] **Xin Chen**, Liang Lin, and Yuefang Gao, "*Parallel Nonparametric Binarization for Degraded Document Images*",Neurocomputing, Volume 189, 43-52 May 2016.

[J4] Xiang-Jun Shen, Lei Mu, Zhen Li, Hao-Xiang Wu, Jian-Ping Gou, **Xin Chen**, "*Large-scale support vector machine classification with redundant data reduction*", Neurocomputing, Vol. 172, Page 189-197 January, 2016.

[J5] Zhiyong He, **Xin Chen**, and Lining Sun, "*Saliency Mapping Enhanced by Structure Tensor*", Computational Intelligence and Neuroscience, Volume 2015

[J6] **Xin Chen,** Yuefang Gao, and Zhonghong Huang, "*CUDA-accelerated fast Sauvola's method on Kepler architecture*", Multimedia Tools and Applications, Vol. 74, Issue 24, Page 11809-11820, December 2015.

[J7] Mathew Blanco, **Xin Chen**, and Yuling Yan, "*A Restricted, Adaptive Threshold Segmentation Approach for Processing High-Speed Image Sequences of the Glottis*", Engineering, Vol. 5, Page 357-362, 2013.

[J8] Yuling Yan, **Xin Chen**, and Diane Bless, "*Automatic Tracing of the Vocal Fold Motion from High-speed Laryngeal Images Sequence*", IEEE Trans. Biomedical Engineering, Vol. 53, No. 7, page 1394-1400, July 2006.

Granted Patents

[P1] Zhen Peng, Yang Liu, Hanxian Huang, Yongxiong Ren, YANG Jishen, Lingzhi Liu,**Xin Chen**, Multi-level intermediate representation decoder for heterogeneous platforms, US11928446B2, 3/2024.

[P2] **Xin Chen**, Zhicai Ou, Hua Zhou, Rubao Mao, Method and system for providing air conditioning, US20210356161A1, 5/2022.

[P3] **Xin Chen**, Hua Zhou, Yu Zhu, Yuxiang Gao, Personalized Laundry Appliance, US10563338B2, 2/2020.

[P4] Dongyan Wang, **Xin Chen**, Hua Zhou, Face Recognition in a Residential Environment, US10650273B2, 5/2019.

Book Chapter

[B1] Matthew Blanco, **Xin Chen**, Yuling Yan, "*Processing of sequential images of the vibrating glottis using adaptive thresholding approach*",Normal and Abnormal Vocal Folds Kinematics: High Speed Digital Phonoscopy (HSDP), Optical Coherence Tomography (OCT) & Narrow Band Imaging, pp 143-152, 1 edition, April, 2015. (ISBN-10: 1511401850, ISBN-13: 978-1511401852)

Honors & Awards

Division Achievement Award for Medical Image Segmentation project, Q3 2022, Intel

Rank #4 in Task 1 of Multi-Modality Abdominal Multi-Organ Segmentation Challenge 2022 (AMOS2022) hosted by MICCAI2022

Team (Manager) of 2018 IEEE International Low-Power Image Recognition Challenge (LPIRC-II): Rank #2 in Track 2 and Rank #3 in Track 3

2005 University of Hawaii Graduate International Traveling Award

Invited Talks

Software Hardware Co-design for AI Acceleration, Innovation Forums of IEEE MIPR 2022

How does AI become part of daily life, Human Cyber Physical Intelligence Integration Lab, Sun Yat-sen University, 2018

Professional Activities

Reviewer for Conferences:

AAAI 2022 2023 2024 2025
CVPR 2022 2023 2004
ECCV 2022 2004
WACV 2023 2004

Reviewer for Journals:

IEEE Transactions on Neural Networks and Learning Systems
IEEE Transactions on Multimedia
Medical Image Analysis
IEEE Transactions on Image Processing (T-IP)

Service

Moderator of Innovation Forums of IEEE MIPR 2024, Industry Challenges of Efficient AI

Moderator of Innovation Forums of IEEE MIPR 2022, Hardware and Software Acceleration for AI Applications

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