Xin Xing
Email: hannibalxing@gmail.com

Education

Jan 2018- Present **PhD Student in Computer Science, University of Kentucky, US**
Aug 2016- Dec 2017 **PhD Student in Electronic and Computer Engineering, Southern Illinois University, US**
Sept 2012- July 2016 **Master of Communication Engineering and Media Technology (INFOTECH), University of Stuttgart, Germany**
Sept 2007- July 2011 **Bachelor of Communication Engineering, Shandong University, China**
Sept 2008- July 2009 **Exchanging Student in Xi'an Jiaotong University, China**

Experience

Research Assistant:
Computer Vision and Machine Learning
Computer Science, University of Kentucky
January of 2018 –Present, Lexington, US
Research on Computer Vision, deep learning application on medical image.

Research Assistant:
Computer Networking
Electronic and Computer Engineering, Southern Illinois University
August of 2016 –December of 2017, Carbondale, US
Research on Multi-path TCP and Software Defined Network.

Master Thesis:
Conditional Evaluation of Deep Learning
Institut für Signalverarbeitung und Systemtheorie (ISS), University of Stuttgart
October of 2015 –April of 2016, Stuttgart, Germany

1. Design a new MLP model for fast image processing and classification by selecting partial regions of image
2. Alg. implementation by Theano
3. MLP model extension for multiple regions selection
4. Clutterred_Mnist dataset implementation based on Mnist

Student Job:
Student Assistant in Geodätisches Institut der University of Stuttgart (GIS)
September of 2015-December of 2016 Stuttgart, Germany
Website IT supporting. Website maintenance and design by HTML

Internship:
Blind Source Separation (BSS) and Machine Learning
Speech and Sound Group (SSG)-EuTEC Sony
February of 2015-July of 2015 Stuttgart, Germany
1. Training time-domain Weiner filters for blind source separation
2. Separation algorithms implementation by Matlab

3. Evaluation and comparison with other methods on the SiSEC 2015 dataset
4. Matlab implementation of a hybrid system that combines deep neural network based source separation with the Wiener filter
5. Basic machine Learning method implementation: K-means alg., Non-negative Matrix Factorization

Student Job:
Student Assistant in Institut für Eisenbahn und Verkehrswesen (IEV) Universität Stuttgart
October of 2014-February of 2015, Stuttgart, Germany
Basic C# programming for Railway system design

Student Job:
Student Assistant in Institut für Robuste Leistungshalbleitersysteme (ILH) Uni. Stuttgart
May Of 2014-September of 2014, Stuttgart, Germany
Working for LaTeX Beamer and Tikz
Wiki maintenance and building (Wikimedia)
Matlab Simulation and GUI design for RF Communication system

Bachelor Thesis:
Optimization Power Allocation of Cooperative Communication System
Based on the algorithm to achieve the optimization power allocation and do simulation with the traditional communication configuration.
1. Introduce the Cooperative Communication and basic protocol
2. Matlab simulation, analysis of the OPA algorithm and advantage

Training

Apr. 7-9 of 2014-GPU Programming using CUDA,
High Performance Computing Center Stuttgart (HLRS)
Apr. 16-17 of 2014-Scientific Visualization,
High Performance Computing Center Stuttgart (HLRS)

Skill

Python, Pytorch, Tensorflow, Theano, C++, C#, Matlab, HTML&CSS, Latex, Java, Eclipse, R

Honor

2018-2019	**Best Paper Award of The 43nd IEEE conference on Local Computer Network (LCN)**
2007-2008	**Shandong University Third-Class Scholarship**
2008-2009	**Shandong University Second-Class Scholarship**
2008-2009	**Second Campus Scholarship**
2008-2009	**Second Campus Certificate of Xi'an Jiaotong University**

Publications

[1] **X. Xing**, G. Liang, Y. Zhang, S. Khanal,AL. Lin, N. Jacobs. ADVIT: VISION TRANSFORMER ON MULTI-MODALITY PET IMAGES FOR ALZHEIMER DISEASE DIAGNOSIS, ISBI 2022

[2] Liang G, **Xing X**, Liu L, Yin Q, Lin AL, Jacobs N. Alzheimer's Disease Classification Using 2D Convolutional Neural Networks. International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), 2021.

[3] Ying Q, **Xing X,** , Lin AL, Jacobs N, Liang G. Multi-Modal Data Analysis for Alzheimer's Disease Diagnosis: An Ensemble Model Using Imagery and Genetic Features. International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), 2021.

[4] **X. Xing**[*], G Liang[*], H Blanton, MU Rafique, C Wang, AL Lin, N Jacobs, "Dynamic Image for 3D MRI image Alzheimer's Disease Classification", ECCV 2020 Workshop, Aug. 2020 (* first co-author)

[5] T. C. Hammond[*], **X. Xing**[*], C. Wang, D. Ma, K. Nho, P. K. Crane, F. Elahi, D. A. Ziegler, G. Liang, Q. Cheng, L. M. Yanckello, N. Jacobs, and AL. Lin, "Beta-amyloid and tau drive early Alzheimer's disease decline while glucose hypometabolism drives late decline," Communications Biology, vol. 3, no. 1, p. 352, Jul. 2020. (* first co-author)

[6] Y. Zhang, X. Wang, H. Blanton, G. Liang, **X. Xing**, and N. Jacobs, "2d convolutional neural networks for 3d digital breast tomosynthesis classification," in IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 2019.

[7] G. Liang, X. Wang, Y. Zhang, **X. Xing**, H. Blanton, T. Salem, and N. Jacobs, "Joint 2d-3d breast cancer classification," in IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 2019.

[8] K. Chen, **X. Xing**, M. R. Palash, J. Liu, J. Martin, "Network-Side Multipath Access Management in Wireless Networks with Software-Defined Networking", IEEE Transactions on Vehicular Technology 68 (10), 10030-10044

[9] K. Chen, **X. Xing**, M. R. Palash, J. Liu, and J. Martin, Improving Wireless Network Performance under MPTCP based Multipath Access, Proc. of the 43rd IEEE Conference on Local Computer Networks, 2018 [**Best paper award**: 1 out of 45 accepted papers out of 150 submissions].

[10] J. Liu, **X. Xing**, K. Chen, and J. Martin, "On design challenges of an endpoint flow association optimization service in a multi-provider wireless heterogeneous network", Proc. of the IEEE International Conference on Communication (ICC), 2018.

[11] J. Liu, **X. Xing**, K. Chen, J. Martin, "Technical Report: On design challenges of an endpoint traffic engineering service in a multi-provider wireless heterogeneous network", 2018.

Abstracts

Hammond, T., Xing, X., Nelson, P., Ham, S., Lin, A. (2020) Metabolite differences in vascular dementia and control human brain tissue [Abstract]. *Alzheimer's Association International Conference.*

Hammond, T., Xing, X., Nelson, P., Ham, S., Lin, A. (2020) Gray and white matter metabolite differences in Alzheimer's disease and normal human brain tissue [Abstract]. *Alzheimer's Association International Conference.*

Hammond, T., Xing, X., Nelson, P., Ham, S., Lin, A. (2020) Metabolite Differences in TDP-43 proteinopathy and control human brain tissue [Abstract]. *Alzheimer's Association International Conference.*

Hammond, T.*, Xing, X.*, Jacobs, N., Lin, A., Alzheimer's Disease Neuroimaging Initiative (ADNI). (2020) β-Amyloid and tau drive early Alzheimer's disease decline while glucose hypometabolism drives late decline [Abstract]. *Alzheimer's Association International Conference.*

Hammond, T.*, Xing, X.*, Jacobs, N., Lin, A., Alzheimer's Disease Neuroimaging Initiative (ADNI). (2019) Phase-dependent importance of amyloid-beta, phosphorylated-tau, and hypometabolism in determining mild cognitive impairment and Alzheimer's disease: A machine learning study [Abstract]. *New York Academy of Sciences: Alzheimer's Disease Therapeutics: Alternatives to Amyloid 2019*