

NAN WU

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EDUCATION

New York University, Center for Data Science

Ph.D. student, GPA: 3.67, supervised by Krzysztof J. Geras and Kyunghyun Cho,

September 2018 - Present

M.S. in Data Science, GPA: 3.85

September 2016 - May 2018

University of Science and Technology of China, Special Class of Gifted Young

B.S. in Statistics and B.A. in Business Administration, GPA: 3.67

September 2012 - June 2016

PUBLICATIONS

Deep Neural Networks Improve Radiologists' Performance in Breast Cancer Screening.

N. Wu, J. Phang, J. Park, Y. Shen, Z. Huang, M. Zorin, S. Jastrzebski, T. Fvry, J. Katsnelson, E. Kim, S. Wolfson, U. Parikh, S. Gaddam, L. Young Lin, K. Ho, J. D. Weinstein, B. Reig, Y. Gao, H. Toth, K. Pysarenko, A. Lewin, J. Lee, K. Airola, E. Mema, S. Chung, E. Hwang, N. Samreen, S Kim, L. Heacock, L. Moy, K. Cho, K. J. Geras. IEEE Transactions on Medical Imaging. 2019.

Code available at: https://github.com/nyukat/breast_cancer_classifier

Globally-Aware Multiple Instance Classifier for Breast Cancer Screening.

Y. Shen, **N. Wu**, J. Phang, J. Park., S. Kim, L. Moy, K. Cho, K. J. Geras. Machine Learning in Medical Imaging: 10th International Workshop, MLMI 2019, held in Conjunction with MICCAI 2019.

Improving localization-based approaches for breast cancer screening exam classification.

T. Fvry, J. Phang, **N. Wu**, S. Kim, L. Moy, K. Cho, K. J. Geras. MIDL 2019, extended abstract.

Screening Mammogram Classification with Prior Exams.

J. Park, J. Phang, Y. Shen, **N. Wu**, S. Kim, L. Moy, K. Cho, K. J. Geras. MIDL 2019, extended abstract.

Breast Density Classification with Deep Convolutional Neural Networks.

N. Wu, K. J. Geras, Y. Shen, J. Su, S. Kim, E. Kim, S. Wolfson, L. Moy, K. Cho. ICASSP 2018.

Code available at: https://github.com/nyukat/breast_density_classifier

High-Resolution Breast Cancer Screening with Multi-View Deep Convolutional Neural Networks.

K. J. Geras, S. Wolfson, Y. Shen, **N. Wu**, S. Kim, E. Kim, L. Heacock, U Parikh, L. Moy, K. Cho. arXiv preprint 2018.

Code available at: https://github.com/nyukat/BIRADS_classifier

RESEARCH EXPERIENCE

CILVR Lab, New York University.

New York

Research Intern

September 2017 - August 2018

- Supervisors: Kyunghyun Cho and Krzysztof J. Geras.
- Worked on projects related with medical image analysis, including building models for breast cancer classification, utilizing global context to image patch classification with DNNs and incorporating patient characteristics features in DNNs for breast cancer classification.

Key Laboratory of Brain Function and Disease , Chinese Academy of Sciences.

Hefei

Undergraduate Research Intern

November 2014 - July 2016

- Supervisor: Xiaochu Zhang.
- Built feature extraction and classification toolbox of real time brain signal. Designed a Neurofeedback platform on addiction via a real-time display of craving status for potential treatment.
- Junjie Bu, Ru Ma, Nan Wu (co-first author), Xiaochu Zhang. (2015). Smoking cue-reactivity cortical connectivity reflected in EEG network in smokers. Invited for oral presentation in The 18th National Academic Congress of Psychology, Tianjin, China.
- Xiaochu Zhang, Junjie Bu, Nan Wu. BrainART. Copyright of Computer Software (ID: 2016SR202558).

Shanghai Institute of Biological Sciences, Chinese Academy of Sciences.*Summer Research Intern,*

Shanghai

June 2013 - July 2013

- Supervisor: Yi-Feng Zhang.
- Assisted in experiments in the Laboratory of Retinal Neural Circuits and presented paper at weekly team meeting.

TALKS

Invited lecture for Capstone Project course, NYU Center for Data Science.

September 2019

AI for Social Good workshop, ICML 2019.

June 2019

CILVR Seminar, NYU Computer Science.

*April 2019 and February 2018***INTERNSHIPS**

AIG, Science.

New York

*Computer Vision and NLP Research Assistant**May 2017 - December 2017*

- Developed networks for car damage detection, especially for generating saliency map. Built connection between real image and 3D projection with generative models.
- Compared performances of various embedding models for insurance data and explored the transition of word space under a growing context space.

Bayesquare Foundation Inc.

New York

*Machine Learning Research Intern**November 2016 - May 2017*

- Built classification model for financial entities using features about the degree of their marginality using machine learning models, including random forests models.

Haloband LLC.

Shanghai

*Growth hacker (Marketing Researcher) Intern**March 2016 - May 2016*

- Built a business model of the product and applied ideas in growth hacking to analyze user types and activities;
- Discovered patterns related with advertising strategies and website designs.

AWARDS

Best Paper Award, AI for Social Good workshop, ICML 2019.

June 2019

Travel Funding, AI for Social Good workshop, ICML 2019.

June 2019

Full Graduate Scholarship, NYU.

2018 - Present

Outstanding Student Scholarship, Top 10% in USTC.

November 2015

Alumni Outstanding Student Scholarship, 6 out of 1027 in School of Gifted Young, USTC.

June 2015

Outstanding Student Scholarship, Top 10% in USTC.

November 2013

Outstanding Freshman Scholarship, Top 5% in USTC.

September 2012

National Olympiad in Biology, Hebei Province, Silver Medal

2011

National Olympiad in Physics, Hebei Province, Bronze Medal

2011

National Olympiad in Informatics, Hebei Province, Silver Medal.

*2010 and 2011***TEACHING EXPERIENCE**

Data Management and Analysis, Computer Science Department at NYU.

Fall 2018

Theory of Probability, NYU Courant Institute.

Spring 2018

Machine Learning and Computational Statistics, NYU Center for Data Science.

Spring 2018

Decision Analytics for Sports, NYU Stern.

Fall 2017

Data Driven Decision Making, NYU Stern.

*Spring 2016***ACTIVITIES**

2018 MIT-Mount Sinai NYC Grand Hack.*November 2018*

Mentor in Rehabilitation & Human Performance Track.

Challenge Cup, National College Student Business Plan Competition.*December 2015*

Team Member & Keynote Speaker, honored with Gold Medal.

China Youth Innovation and Entrepreneurship Venture Competition.

November 2015

Team Member & Keynote Speaker.

APRU-University of Malaya Program: Developing Future Global Leaders of the Pacific Rim.

August 2015

Student Ambassador of USTC.

Women soccer team of School for Gifted Young, USTC.

2012 - 2016

Member & Captain at 2015.

Student Union of School for Gifted Young, USTC.

2012 - 2014

Member & President at 2014.

TECHNICAL SKILLS

Programming Languages
Framework

Python, C, Java, MATLAB, R, SQL, SAS, Latex
PyTorch, Tensorflow, Keras, Hadoop, Spark, PySpark

LANGUAGES

Mandarin, mother tongue

English, fluent