WENYI WANG

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EDUCATION

Northwestern University — Evanston, Ill.
M.S., Computer Science — Sept. 2019-Mar. 2021
- **GPA: 3.913/4.0**

University of California, Irvine — Irvine, Calif.
Visiting Student and Research Assistant, Dept. of EECS — Jul. 2018-Sept. 2018
- **GPA: 4.0/4.0**

Northeastern University — Shenyang, China
B.E. in Software Engineering — Sept. 2015–Jul. 2019
- **Major GPA: 3.9/4.0**

Research Topics:
- Immersive and Intelligent Humanoid Robot Control System
- Chinese Poetry Teaching System for Children on ARCore Platform

PUBLICATIONS

J. Ma, **W. Wang**, A. Neilson, M. Cuevas, B. Homerding, C. Liu, Z. Huang, S. Campanoni, K. Hale, P. Dinda, "Paths to OpenMP in the Kernel," *International Conference for High Performance Computing, Networking, Storage, and Analysis, SC21*
- Main contributor to the code, experiments, data analysis, paper writing and graphs.

SELECTED AWARDS AND HONORS

- **Exceptional Funding of the Nation (China),** awarded to the **top 5%**, the 12th National Innovation Training Program for College Students (2018)
- **Gold Award,** China College Students' Entrepreneurship Competition in Liaoning Province (2018)
- **Nationwide Second Prize,** China, "Innovation has a future" University AI Innovation Grand Competition (2018)
- **Second-prize Scholarship,** Northeastern University (Academic Merit) (2018)
- **Third-prize Scholarship,** Northeastern University (Academic Merit) (2016)
- **Third Prize,** Mathematics Competition of Chinese College Students, Liaoning Province (involves one million college students, 2016)

RESEARCH EXPERIENCE

Massachusetts Institute of Technology — Cambridge, Mass.
Graduate Research Intern for Professor Pattie Maes and Dr. Camilo Rojas — May.2021–present
Media Lab, Project Us
- Led the effort to develop an artificial intelligence emotion recognition system that can provide real-time feedback from the cloud
- Performed advanced work on all layers of the stacks, including front-end and back-end development, pushing the project to the client-ready pilot stage while participating in the MIT delta v program
- Achieved comparable performance by improving and implementing an emotion recognition model, with

only half of the training data from the RECOLA paper
- Built a testbed including a complete pipeline for audio preprocessing, voice emotion detection and real-time audio demonstration, and developed an MS Teams App

Carnegie Mellon University Pittsburgh, Pa
Graduate Research Intern for Professor Min Xu May.2021–present
Xu lab, Saliency Detection for Cryo-Electron Tomography
- Led the research on 3D saliency detection for Cryo-ET by applying attention mechanism and teacher-student model in an unsupervised environment
- Researched and wrote VS Code Remote SSH tutorial for AITom -- contributions can be found here
- Contributed to baseline experiments and paper writing for the lab's new saliency detection algorithm

Northwestern University: Evanston, Ill.
Graduate Research Assistant for Professor Peter Dinda Mar. 2020–Aug. 2021
PLab, The Interweaving Project
- Achieved an average performance gain of 22% (geometric mean) across scales and benchmarks for runtime in kernel implementation by inspecting runtime behavior
- Customized LLVM/OpenMP runtime library libomp and implemented pthread-embedded library (PTE) to make libomp function within Nautilus kernel
- Discovered a Floating-Point logic error in Nautilus codebase by benchmarking Gaussian elimination.
- Ported different benchmarks including NAS Parallel Benchmarks

Northeastern University Shenyang, China
Team Leader under Professor Tao Ren Nov.2016–Nov. 2018
Immersive and Intelligent Humanoid Robot Control System
- Led design of the overall structure of the control system, contributing 70% of a project's code on three different platforms with five programming languages
- Designed an algorithm to achieve body movement and gesture recognition based on Kinect and enable the robot to move more naturally and accurately
- Proposed novel ideas for developing the robot's "deduction" abilities in accordance with the environment
- Implemented that idea into a system that can provide hints for searching for objects that are not recognized by the object detection algorithm in the current camera capture frame

University of California, Irvine Irvine, Calif.
Independent Study under Professor G.P. Li Jun.–Sept. 2018
Calit2, Intelligent Charging System for Electric Vehicle
- Designed overall architecture of a smart EV charging system and implemented corresponding modules
- Implemented the back-end data collector module that fetches real-time energy blend data from California ISO and the Power Predictor module that predicts future power usage

Northeastern University *China* Shenyang, China
Independent Study under Professor Tao Ren Jan. –Feb. 2018
Seismic Wave Recognition and Warning System
- Explored how to use deep learning methods to identify real-time seismic waves and evaluate and predict the magnitude