

WEINAN WANG

Edison, NJ 08817

Tel: 732-789-5103 | E-mail: weinan.wang@hotmail.com

Website: <https://weinanwang-ru.github.io/>



EDUCATION

Rutgers, The State University of New Jersey, Ph.D. Candidate Electrical and Computer Engineering G.P.A.: 4.0/4.0 Thesis Topic: Artificial Intelligence for Continuous Health Monitoring	<i>01/2021 – Present</i>
Rutgers, The State University of New Jersey, M.Sc. Electrical and Computer Engineering G.P.A.: 4.0/4.0	<i>09/2018 – 01/2021</i>
University of Electronic Science and Technology of China, B.Sc. Mechanical Design and Automation G.P.A.: 3.88/4.0	<i>09/2015 – 06/2018</i>

WORKING EXPERIENCE

Research Assistant at Integrated Systems & Neuroimaging Lab, Rutgers University <ul style="list-style-type: none">Developed combined convolutional and recurrent neural networks to enable data-driven end-to-end deep learning on physiological sensor signals (ECG, PPG) for estimating human health status (blood pressure).Developed methods to use pre-trained image classification networks to interpret physiological signals via transfer learning approaches, by converting 1-D physiological signals to images.Used statistical machine learning for feature-driven interpretation of physiological signals.Developed and released PulseDB, an open cardiovascular signal dataset.Developed and released PulseLab, an open-source MATLAB GUI and API for interactive optimization of cardiovascular signal processing pipeline for machine learning applications.Developed GUI for brain-computer interface (BCI) systems using Qt5.(Cooperative) Used image registration methods to analyze cell's responses to exterior stimuli.	<i>09/2019 – Present</i>
Student Associate at Honda Research Institute <ul style="list-style-type: none">Develop deep learning models to facilitate human understanding in robotic systems.	<i>01/2024 – Present</i>
Conference Reviewer IEEE Biomedical Circuits and Systems Conference (BIOCAS) IEEE Engineering in Medicine & Biology Society Conference (EMBC)	<i>2021 – 2023</i> <i>2022 – 2024</i>

TECHNICAL SKILLS

- Python (PyTorch, TensorFlow, scikit-learn, NumPy, Qt5, Pandas)
- MATLAB® (GUI development, object-oriented programming, Digital Signal Processing toolbox)
- C++, AutoCAD®, Cadence® Virtuoso, SolidWorks

SELECTED PUBLICATIONS AND PATENT

- **W. Wang**, P. Mohseni, K. L. Kilgore and L. Najafizadeh, "Demographic Information Fusion Using Attentive Pooling In CNN-GRU Model For Systolic Blood Pressure Estimation," presented in *45th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2023*.
- **W. Wang**, P. Mohseni, K. L. Kilgore and L. Najafizadeh, "**PulseDB**: A large, cleaned dataset based on MIMIC-III and VitalDB for benchmarking cuff-less blood pressure estimation methods," *Frontiers in Digital Health*, vol. 4, 2023. ([open dataset](#)) (**cited in 2023 NeurIPS workshop**)
- **W. Wang** and L. Najafizadeh, "Imaging physiological signals," *56th Asilomar Conference on Signals, Systems, and Computers, 2022*. (**invited**)
- **W. Wang**, P. Mohseni, K. Kilgore, and L. Najafizadeh, "**PulseLab**: An integrated and expandable toolbox for pulse wave velocity-based blood pressure estimation," *43rd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), 2021*. ([open MATLAB toolbox](#))
- **W. Wang**, P. Mohseni, K. L. Kilgore and L. Najafizadeh, "Cuff-less blood pressure estimation from photoplethysmography via visibility graph and transfer learning," *IEEE Journal of Biomedical and Health Informatics*, vol. 26, no. 5, pp. 2075-2085, May 2022. (**selected as feature article**)
- **W. Wang** and L. Najafizadeh, "Computer-based platforms and systems configured for blood pressure estimation from photoplethysmography via visibility graph and transfer learning and methods of use thereof". (**US20230148879A1**)

AWARDS

- Rutgers ECE Teaching Assistant Award *May 2023*
- Rutgers ECE Student Development Award (Graduate) *May 2022*
- China National Scholarship (Undergraduate, Annual, top 5%, ¥ 8000) *November 2016*