



HealthDL

2nd International Workshop on Deep Learning for Wellbeing Applications Leveraging Mobile Devices and Edge Computing

Workshop co-located with ACM MobiSys 2021

Call for Papers

The availability of affordable wearable Internet of Things (wIoT) and edge devices with embedded sensors has revolutionized intelligent health and wellness applications. Users often use wIoT and smartphones to collect medical data and send them to the cloud for further analysis. Edge-based solutions, where analysis and inference of such data are carried out on edge devices, have been proposed to address users' security and privacy concerns since users' sensitive data is not transferred to untrusted cloud servers for inferencing. However, resource constraints on the edge devices also pose challenges in using deep learning solutions. Research needs to be conducted to produce efficient system designs, algorithms, and deep learning models that can be deployed in edge devices. Such outcomes will enable better personalization of health-related solutions and enhance users' experience. Furthermore, thanks to the ever-improving voice recognition and synthesis schemes, many wearables and smartphone applications now rely on voice assistants to interact with users. Existing work has shown that such interactions can significantly improve users' experience but incur significant security and privacy issues. This workshop aims to fill the gap between deep learning for intelligent healthcare and power-constrained wIoT and edge and create impactful solutions to help in the well beings of users. This workshop invites researchers from academia and industry to submit their current research for fostering academic-industry collaboration. The scope of this workshop includes but not limited to the following topics:

- E2E deep learning for smart health applications.
- Deep learning for sensing, analysis and interpretation of wIoT healthcare data
- Resource constrained deep learning schemes for smartphones and wIoT.
- Edge-based deep learning & AI for mental health
- Transfer learning and model compression for smart health applications
- Context-aware ubiquitous healthcare systems based on wearables, edge machine learning
- Emerging applications or sensors for personalized health and fitness
- User and device authentication for smartphones and wIoT
- Cutting edge technology for physiological sensing

Due to the COVID-19 situation, the conference organizers kept in mind the safety of all participants and have decided to hold the conference in a completely online mode. Accepted and presented technical papers will be included in the 2021 ACM MobiSys Proceedings and published in the ACM Digital Library. See the website for detailed instructions and submission rules and regulations and for author requirements for accepted papers.

IMPORTANT DATES

WORKSHOP CHAIRS

STEERING COMMITTEE

Full Paper Submission Deadline:

~~May 7 2021~~

May 21 2021

Notification of Acceptance:

June 4 2021

Camera-ready Submission:

June 11 2021

Yan Wang

Temple University

Jerry Cheng

New York Institute of Technology

Mooi Choo Chuah

Lehigh University

Yingying (Jennifer) Chen

Rutgers University

For more information, visit here: <https://cis.temple.edu/~yanwang/healthdl2021/>