SHIBO ZHANG

Final-year Computer Science PhD

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CAREER OBJECTIVE

- My PhD research area is **machine learning** and **human activity recognition**.
- I have experience in applying machine learning and deep learning techniques to help advance our ability to perceive human behaviors and facilitate human life. I am especially willing to attack the hardest and most challenging problems and make a difference in our lives.
- I am expected to graduate in the summer of 2021.

SELECTED PROJECTS

Deep Generative On-body Sensor Synthesis from Video

2020 – 2021

- Propose a deep generative cross-modal model to synthesize on-body sensor data from videos. Experiments conducted on public sensor-based activity recognition datasets illustrate the validity of the synthetic data.
- Aims at expand on-body sensor dataset, by generating synthetic sensor data from video.

Sensor Fusion for Complex Activity Detection

2019 – 2021

- Applied deep learning based multi-sensor (IMUs, respiration sensor, and GPS) fusion algorithms to detect daily activities including smoking and eating gestures in long-term wild settings.
- Proposed a time synchronization method to resolve the clock-sync issue between wearable-camera and on-body accelerometer. Published a paper on top conference Ubicomp as a co-first author.

An Eating Detection Approach using a Multi-sensor Necklace

2017 – 2019

- Proposed a two-stage eating detection approach multi-sensor necklace. Applied a periodic peak detection algorithm in large volume of time series data, followed by gradient boosting algorithm to detect eating activity in free living setting. A density-based clustering method is then used towards eating episode recognition.
- Published a first-author paper on top conference Ubicomp and won the Best Presentation Runner-up Award.

HONORS AND AWARDS

2020 **Best Poster Award**, UbiComp (2%)
2020 **Best Presentation Runner-up**, Audience Choice, UbiComp (1.3%)
2019 **Distinguished Paper Award**, IMWUT (3.7%)
2018 Student Travel Scholarship, NSF
2017 Travel Grant, Northwestern
2016 **Best Paper Award**, ACM BodyNets
2013 Best Intern Award, Eaton
2012 Best Intern Award, Eaton
2012 Outstanding Thesis Award, HIT (3%)
2012 Eaton Innovation Scholarship

SKILLS

Machine Learning | Deep Learning | Time-series Analysis | Signal Processing | Speech Recognition | Computer Vision | Embedded System

Python | Matlab | R | C & C++

EDUCATION

PhD in Computer Science

Northwestern University

2016 – 2021 Evanston, IL

MS in Computer Science

Northwestern University

2015 – 2017 Evanston, IL

BS & MS in Electrical Engineering

Harbin Institute of Technology

2008 – 2014 Harbin, China

EMPLOYMENT

Research Intern

Samsung Research America

2021 Jan – Apr Remote

Machine Learning Intern

OPPO Research US

2019 Jul – Sep Palo Alto, CA

Engineering Intern

DJI Technology Co.

2015 Jul – Aug Shenzhen, China

Engineering & Leadership Trainee

Eaton Corp., Global Research & Technology

2014 –2015 Shanghai, China

Research Intern (thesis)

Eaton Corp., Global Research & Technology

2012 –2014 Shanghai, China

PUBLICATIONS

20+ publications in peer-reviewed conferences and journals.