QINFENG XIAO

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Education

Beijing Jiaotong University   Sep. 2018 – Jun. 2021
MEng of Computer Science (GPA 3.53/4.0; Supervised by Prof. Jing Wang)   *Beijing, Haidian District*

North University of China   Sep. 2014 – Jun. 2018
BEng of Process Equipment and Control Engineering   *Shanxi, Taiyuan*

Publications

- Jianan Ye*, **Qinfeng Xiao***. *CoSleep: A Multi-view Representation Learning Framework for Self-Supervised Learning of Sleep Stage Classification.* IEEE Signal Processing Letters, 2021 (JCR-Q1). (* equal contribution)

- **Qinfeng Xiao**. *Self-Supervised Learning for Sleep Stage Classification with Predictive and Discriminative Contrastive Coding.* ICASSP 2021 (CCF-B).

- **Qinfeng Xiao**. *Unsupervised Anomaly Detection with Distillated Teacher-Student Network Ensemble.* Entropy, 2021 (JCR-Q2).

- Yunxiao Liu, Youfang Lin, **Qinfeng Xiao**. *Self-adversarial Variational Autoencoder with Spectral Residual for Time Series Anomaly Detection.* Neurocomputing, 2021 (JCR-Q1).

- Jing Tang, **Qinfeng Xiao**. *Simulation of Proton-Induced DNA Damage Patterns Using an Improved Clustering Algorithm.* Radiation Research, 2020 (JCR-Q1).

Work Experience

Xiaomi Inc. – IoT Department (Wearable Devices)   July 2021 – present
Machine Learning Engineer – Sports & Healthcare Algorithm   *Beijing, Haidian District*

- I'm responsible for developing state-of-the-art algorithms of real-world problems applied on wearable devices, including:
  - energy expenditure prediction based on Transformer and multi-task learning;
  - Xiaomi IoT application: smart TV controlling using wearable devices and gesture recognition;
  - smart watch fall detection with wearable device sensors, e.g. accelerator and gyroscope;
  - smart fitness assessment based on collected physilogical data, e.g. heartrate, breathing rate, pressure and tracking data;
- Highlights of the work experience:
  - collaborating with top-tier hospitals (e.g. Peking University Third Hospital);
  - conducting data collection projects (including protocol designing, participant gathering, and data analysis);
  - I developed apps for both the smart watch and the smartphone;
  - I submitted several technical patents to National Intellectual Property Administration;
  - machine learning solutions developed by me are released on real products;

Teaching Assistant   September 2019 – December 2019
Machine Learning for Undergraduates   *Beijing, Haidian District*

- I'm responsible for assisting machine learning courses teaching, holding recitation and designing coding assignments.

Honors & Awards

- Outstanding Graduate Thesis Award of Beijing Jiaotong University (2021)

- First-class Scholarship of Beijing Jiaotong University (2020 & 2021)

Other Experiences

- I reviewed papers for the following journals: IEEE Transactions on Neural Networks and Learning Systems (TNNLS), Physics in Medicine and Biology and Scientific Reports.

- I developed an open-source python toolkit, PyADTS, aimed at accelerating the workflow of time-series anomaly detection for researchers.

Skills

Programming: C, C++, Python, Matlab, Java, Android Development, with practical experiences
ML/DL Frameworks: Scikit-learn, PyTorch, with practical experiences
Languages: English, Chinese Mandarin (native)