Ziwei Zhu

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EDUCATION:

PhD in Computer Science: Texas A&M University, GPA – 4.0/4.0 08.2016-present

BS in Computer Science: Wuhan University, GPA – 3.77/4.0 (ranking top 1% of 219) 09.2012-07.2016

SKILLS:

- Data analyzing and signal processing using MATLAB.
- Developing the data analysis applications using Python with the Scikit-learn, Pandas and Numpy libraries.
- Having solid foundations of machine learning algorithms, statistics and linear algebra knowledge.
- Developing the J2SE desktop applications, J2EE web applications, and Android applications.
- Having strong capability of self-studying and cooperation.

PROFESSIONAL EXPERIENCE:

- Research Assistant, Embedded Signal Processing Lab, Texas A&M University 08/16 – present
  - Researched and proposed an analysis method for students' cognitive states by hand motions and heart activities data. Various signal processing techniques, statistical analysis methods and machine learning algorithms were investigated and used. A conference paper was published.
  - Researched context-aware gestures recognition by motion sensors and magnetometer. Leveraged various modeling methodologies to determine the directions of hand gestures and body activities. Designed an innovative algorithm to combine several sources of information for the magnetometer calibrating.
  - Built a demonstrative system for enhanced conference room for the 2016 TerraSwarm Annual Meeting. Leveraged heterogeneous wearable sensors including IMUs, PPG, RSSI, and many environmental sensors to extract conference context information. I built the whole data collecting and storing framework and also implemented several activities recognition functions such head nodding&shaking, hand clapping, typing, sitting down, and standing up.
- Exchange student, ECEN department, Texas A&M University 08/15 – 12/15
  - Built a gestures-based control system for smart lamps using IMUs. Applied a Dynamic Time Warping based stream monitoring algorithm to achieve the gesture recognition and extended the algorithm to adaptively support use-customize gestures. Demo Video.
- Software development intern, Analysys company, Beijing China 06/15 – 08/15
  - Developed a backend management system with complicated business logic leveraging the predominant web application architectures (SpringMVC, Mybatis and Velocity).
  - Built and maintained a user profile database using MySql database.
- Undergraduate Research Assistant, Wuhan University, Wuhan China 09/14 – 06/16
  - Participated in the Mobile Office Automation System project and developed two modules for the Android applications. One is the company inner news browser, another is the engineering project data visualization system.

PUBLICATION:

Conference Paper:

1) **Ziwei Zhu**, Sebastian Ober, Roozbeh Jafari, Modeling and Detecting Student Attention and Interest Level Using Wearable Computers, *IEEE International Conference on Wearable and Implantable Body Sensor Networks (BSN), May 9-12, 2017, Eindhoven, The Netherlands*, Accepted for publication.

HONOR:

- First Class Scholarship of Wuhan University (top 5%) 2014-2015
- National Scholarship from the Ministry of Education of the People's Republic of China (2/210) 2013-2014
- Outstanding Students Scholarship of Wuhan University (top 20%) 2012-2013