YUN-WEI CHU

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RESEARCH INTERESTS

My research interests span machine learning and deep learning method including but not limited to Natural Language Process, Computer Vision and Recommendation System.

EDUCATION

Purdue University, West Lafayette, IN *Sep 2020 - Present*
Ph.D. in Electrical & Computer Engineering
Advisor: Dr. Christopher Brinton

National Chiao Tung University, Hsinchu, Taiwan *Sep 2015 - Nov 2017*
M.S. in Electrical & Control Engineering
Advisor: Dr. Bing-Fei Wu

National Chi Nan University, Nantou, Taiwan *Sep 2011 - Jun 2015*
B.S. in Electrical Engineering.

RESEARCH EXPERIENCE

Natural Language Processing and Sentiment Analysis Lab, Academia Sinica *Apr 2019 - Present*
Research Assistant, supervised by Dr. Lun-Wei Ku

- Conduct research of NLP topics: Video Dialogue Question Answering, Visual Storytelling, and Knowledge-Graph-based Recommendation System

Chaotic Systems and Signal Processing Lab, National Chiao Tung University *Sep 2015 - Nov 2017*
Research Assistant, supervised by Dr. Bing-Fei Wu

- Managed and conducted the research of the image-based heart rate detection system; led and trained 3 undergraduate students on the project.
- Drafted a grant proposal, including both research proposal and budget planning, and won NTD 20 million of venture capital from Ministry of Science and Technology.

PUBLICATION

Journal Papers

B. Wu, Y. Chu, P. Haung, M. Chung. Neural Network Based Luminance Variation Resistant Remote-Photoplethysmography for Drivers Heart Rate Monitoring. *IEEE Access*, 2019.

Conference Papers

Y. Chu, K. Lin, C. Hsu, L. Ku. Multi-step Joint-Modality Attention Network for Audio Visual Scene-Aware Dialog System. *AAAI workshop on Dialog System Technology Challenge*, 2020.

C. Tai, M. Wu, Y. Chu, S. Chu, L. Ku. MVIN: Learning multi-view items for recommendation. *International ACM SIGIR Conference*, 2020.

B. Wu, Y. Chu, P. Haung, M. Chung. A Motion Robust Remote-PPG Approach to Drivers Health State Monitoring. *ACCV workshop on Computer Vision Technologies for Smart Vehicle*, 2016.

B. Wu, Y. Chu, P. Haung, M. Chung. Applied kNN and SVM classification in image-based Photoplethysmography. *MATLAB and Simulink conference*, 2016.

Patents

B. Wu, M. Chung, T. Tsou, Y. Chu. Non-contact Heartbeat Rate Measurement Apparatus. *Taiwan Patent #I667635*, Issued Aug 2019.

B. Wu, M. Chung, T. Tsou, Y. Chu. Monitoring System and Monitoring Method for Infant. *Taiwan Patent #I658815*, Issued May 2019.

AWARDS AND HONORS

Special Award of MediaTek IoT Competition, Industrial Development Bureau, Taiwan *2016*
Outstanding Team Award of NCTU Talentrepreneur Innovation Competition, NCTU, Taiwan *2016*
3rd place of TIC100 Talentrepreneur Innovation Competition, Advantech Inc., Taiwan *2016*

SKILLS

Languages: Mandarin (native), English (professional working proficiency)
Programming Languages: Python, C/C++, Matlab
Libraries/Toolkits: PyTorch, Tensorflow, Scikit-learn