

# YUN-WEI CHU

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## RESEARCH INTERESTS

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

## EDUCATION

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- 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 & TEACHING EXPERIENCE

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- 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 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 research of 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.
- Institute of Electrical and Control Engineering, National Chiao Tung University** *Feb 201 - Feb 2017*  
Teaching Assistant - Digital Signal Processing (IEC5202)  
Teaching Assistant - Student Service Education (UEE1001)

## PUBLICATION

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### 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

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<b>Special Award of MediaTek IoT Competition</b> , Industrial Development Bureau, Taiwan	<i>2016</i>
<b>Outstanding Team Award of NCTU Talentpreneur Innovation Competition</b> , NCTU, Taiwan	<i>2016</i>
<b>3rd place of TIC100 Talentpreneur Innovation Competition</b> , Advantech Inc., Taiwan	<i>2016</i>

## SKILLS

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**Languages:** Mandarin (native), English (professional working proficiency)

**Programming Languages:** Python, C/C++, Matlab

**Libraries/Toolkits:** PyTorch, Tensorflow, Scikit-learn

**CV last updated:** June 19, 2020