

REN LI

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<https://liren2515.github.io/page/>

EDUCATION

Purdue University

MS in Electrical and Computer Engineering

Department of Electrical and Computer Engineering

August 2016 - May 2019

Overall GPA: 3.94/4.0

University of Science and Technology of China (USTC)

Bachelor of Electrical Engineering

Department of Electrical Engineering and Information Science

August 2012 - June 2016

Overall GPA: 4.02/4.3

Rank: 1/106

TECHNICAL STRENGTHS

Computer Languages

Python, C/C++

Software & Tools

PyTorch, TensorFlow, MATLAB

WORKING EXPERIENCE

United Imaging Intelligence, Research Intern

September 2019 - Present

- **Human Mesh Recovery:** Recovering human pose and shape from RGB-D or RGB input under daily or medical environment. Targeting at a contactless patient positioning system that can enable scanning patients in a completely remote and contactless fashion.

SenseTime, Research Intern/Part-time Researcher

May 2019 - February 2020

- **Face Swap:** Building a large-scale dataset for face forgery. Implementing a GAN-based model to generate face swapping videos, and conducting a comprehensive study that evaluates representative detection baselines under different noise settings.

Purdue University, Research Assistant

September 2016 - May 2019

- **EEG-Based Visual Classification:** Building a large dataset for the task of EEG-based visual classification, analyzing EEG signals by various models to do the image/video classification for the understanding of human perception, and visualizing the spatial, temporal and spatio-temporal activation maps of the human brain by novel methods. Also refuting some erroneous works which achieved high accuracy via wrong experimental settings.
- **Visual Relationship Detection Based Video Retrieval:** Building a CNN model to reason the visual relationship between two objects within a video frame, and assembling the frame-level visual relationship to obtain the video-level tags for each tracked object tube, which can be used for video retrieval.
- **Deep Intermodal Video Analytics (DIVA-IARPA):** Implementing the evaluation metrics, and assisting NIST to correct the ill-defined metrics in the released documents and fix the bugs existing in the official scorer.

Gottfried Wilhelm Leibniz Universitt Hannover (LUH), Research Assistant January 2016 - May 2016

- **Contact-Free Camera Measurements of Heart Rate:** Extracting the color traces of RGB channels within the tracked face region in the video and deriving the heart rate from the color traces by filtering and frequency analysis. Achieving more robust and accurate performance on heart-rate estimation than other state-of-the-art benchmarks.

- **Synthesis Distortion Estimation in 3D Video**: Analyzing the virtual view synthesis distortion induced by depth error for 3D video coding, and refining the distortion estimation model based on statistical information.

PUBLICATIONS

Ren Li*, Srikrishna Karanam*, Fan Yang*, Wei Hu, Terrence Chen, Ziyang Wu, "*Towards Contactless Patient Positioning*", Transactions on Medical Imaging (TMI), 2020.

Ren Li, Jared S. Johansen, Hamad Ahmed, Thomas V. Ilyevsky, Ronnie B Wilbur, Hari M Bharadwaj, and Jeffrey Mark Siskind, "*The Perils and Pitfalls of Block Design for EEG Classification Experiments*", IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2020.

Georgios Georgakis*, **Ren Li***, Srikrishna Karanam, Terrence Chen, Jana Kosecka, Ziyang Wu, "*Hierarchical Kinematic Human Mesh Recovery*", ECCV, 2020.

Fan Yang*, **Ren Li***, Srikrishna Karanam, Terrence Chen, Ziyang Wu, "*Robust Multi-modal 3D Patient Body Modeling*", MICCAI, 2020.

Liming Jiang, **Ren Li**, Wayne Wu, Chen Qian, and Chen Change Loy, "*DeeperForensics-1.0: A Large-Scale Dataset for Real-World Face Forgery Detection*", CVPR, 2020.

Ren Li, Changjiang Cai, Georgios Georgakis, Srikrishna Karanam, Terrence Chen, and Ziyang Wu, "*Towards Robust RGB-D Human Mesh Recovery*", Technical Report, 2020.

Yijian Xiang, Lu Fang, **Ren Li**, N. M. Cheung, "*Depth Error Induced Virtual View Synthesis Distortion Estimation for 3D Video Coding*", accepted by IEEE Data Compression Conference (DCC), Dec. 2014.

* equal contribution.

AWARDS & HONORS

Guo Moruo Scholarship*, USTC, 2015

National Scholarship (Top 2%), MOE of China, 2014

The Talent Program Scholarship (Top 3%), USTC, 2014

*Guo Moruo Scholarship is the first scholarship of P.R. China, and the most highly regarded honor by USTC students and alumni, in name of our first president Mr. Guo Moruo.