Yao Rong

CONTACT INFORMATION

University of Tübingen
Dpt. of Computer Science
Human-Computer Interaction
Sand 14, 72076, Tübingen, Germany

yao.rong@uni-tuebingen.de
hci.uni-tuebingen.de
Google Scholar/Yao Rong
Github/yaorong0921

RESEARCH INTERESTS

My research interest lies at the **intersection of human and artificial intelligence**: Computer Vision, Human-Computer Interaction, Explainable AI, Human-centered AI and Deep Learning. I aim to bring human knowledge into AI models, thus developing AI applications that humans can well understand and trust.

EDUCATION

Ph.D., Computer Science, 2019.09 – present
- University of Tübingen, Germany
- Adviser: Professor Enkelejda Kasneci
- Area of Study: Human-Computer Interaction

M.S., Electrical and Computer Engineering, 2016.10 – 2019.06
- Technical University of Munich, Germany
- Thesis Topic: *Real-time Hand Gesture Recognition based on a ToF Camera*
- Area of Study: Human-Machine Communication

B.Eng., Mechatronics, 2012.09 – 2016.09
- Munich University of Applied Sciences, Germany & Tongji University, China *(Dual degree program)*
- Thesis Topic: *Real-time Hand Gesture Detection and Tracking with OpenCV Library on Android Devices*

RESEARCH PUBLICATIONS

[1] **Rong, Y.**, Xu, W., Akata, Z., & Kasneci, E. (2021)
Human attention in fine-grained classification
In *2021 British Machine Vision Conference (BMVC)*

[2] **Rong, Y.**, Han, C., Hellert, C., Loyal, A., & Kasneci, E. (2021)
Artificial intelligence methods in in-cabin use cases: A survey
IEEE Intelligent Transportation Systems Magazine (ITSM)

[3] **Rong,Y.***, Leemann, T.*, Borisov, V., Kaneci, G., & Kasneci, E. (2021)
Evaluating feature attribution: An information-theoretic perspective *(under review)*

[4] **Rong,Y.**, Kassautzki, N.-R., & Kasneci, E. (2021)
Where and what: Driver attention-based object detection *(under review)*

[5] **Rong, Y.**, Akata, Z., & Kasneci, E. (2020)
Driver intention anticipation based on in-cabin and driving scene monitoring
In *2020 IEEE 23rd International Conference on Intelligent Transportation Systems (ITSC)*

[6] Kopuklu, O., Ledwon, T., **Rong,Y.**, Kose, N., & Rigoll, G. (2020)
Drivermhg: A multi-modal dataset for dynamic recognition of driver micro hand gestures and areal-time recognition framework.
In *2020 15th IEEE International Conference on Automatic Face and Gesture Recognition (FG)*.

[7] Fuhl, W., **Rong,Y.**, Motz, T., Scheidt, M., Hartel, A., Koch, A., & Kasneci, E. (2020)
Explainable online validation of machine learning models for practical applications
In *2020 25th International Conference on Pattern Recognition (ICPR)*

[8] Fuhl, W., **Rong,Y.**, & Kasneci, E. (2020)
Fully convolutional neural networks for raw eye tracking data segmentation, generation, and reconstruction.
In *2020 25th International Conference on Pattern Recognition (ICPR)*

[9] Kopuklu, O., **Rong,Y.**, & Rigoll, G. (2019)
Talking with your hands: Scaling hand gestures and recognition with CNNs.
In *Proceedings of the IEEE/CVF International Conference on Computer Vision Workshops (ICCVW)*

Research Projects

Joint Research Project, 2020
- Human Attention in Computer Vision Applications
- with the research group EML (Explanable Machine Learning), University of Tübingen
- Adviser: Professor Zeynep Akata

Internship, 2018 – 2019
- Real-time Hand Gesture Recognition based on a ToF Camera
- at Infineon Tech-nologies AG, Germany

Research Project, 2019
- "Channel Multiplexing" Module Design
- at the research group Integrated Systems, Technical University of Munich

Research Project, 2018
- Gait Recognition Using a Neural Network Autoencoder
- at the research group Human-Machine Communication, Technical University of Munich

Teaching Experience

University of Tübingen

- Postgraduate seminar on **Advanced Topics in Human-Computer Interaction**, 2021
- Graduate seminar on **Introductory Topics in Human-Computer Interaction**, 2020
- Postgraduate course on **Multimodal Human-Computer Interaction**, 2020
- Mentoring four Master and Bachelor theses, 2020-2021

Technical University of Munich

- (*Teaching Assistant*) Postgraduate course on **SystemC**, 2018

Service

Conference Organizing Committee
- the 14th ACM Symposium on Eye Tracking Research and Applications (ETRA 2022), Diversity & Inclusion Chair

Student Advisory Service
- at the Department of Computer Science, University of Tübingen

Skills

Programming Languages
- Python, C, C++, Java, Matlab

Languages
- English, German, Chinese (native)

Tools & Libraries
- Pytorch, Tensorflow, TeX, OpenCV, JFace, SWT, Verilog, etc.