

Yao Rong

CONTACT INFORMATION

Technical University of Munich
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EDUCATION

Technical University of Munich, Germany, 2019.09 – present

- Ph.D. candidate at TUM School of Computation, Information and Technology
- Adviser: [Prof.Dr. Enkelejda Kasneci](#)
- Area of Study: Human-Centered Technologies for Learning

Technical University of Munich, Germany, 2016.10 – 2019.06

- M.S., Electrical and Computer Engineering
- Thesis Topic: *Real-time Hand Gesture Recognition based on a ToF Camera*
- Area of Study: Human-Machine Communication
- GPA: 3.8 (German GPA: 1.3)

Tongji University, China & Munich University of Applied Sciences, Germany

2012.09 – 2016.09

- B.Eng., Mechatronics (*Dual degree program*)
- Thesis Topic: *Real-time Hand Gesture Detection and Tracking with OpenCV Library on Android Devices*

RESEARCH INTERESTS

My research interest lies at the intersection of AI systems and human interaction with a specific focus on **human-centered Explainable AI (XAI)**, **human-centered AI**, and **deep learning**. I am particularly focusing on how XAI techniques can enhance the understanding, trust, and usability of AI systems for end-users. By incorporating user feedback, human cognitive models, and effective model explanation techniques, my aim is to bridge the gap between complex AI algorithms and human interpretability, ultimately fostering **responsible and transparent AI** deployment in various domains.

RESEARCH PUBLICATIONS

- [1] **Rong, Y.**, Wang, G., Feng, Q., Liu, N., Liu, Z., Kasneci, E., Hu, X. (2023)
[Efficient GNN Explanation via Learning Removal-based Attribution](#)
under review
- [2] **Rong, Y.**, Özdel, S., Albaba, BM., Kuo, YL., Wang X., Kasneci, E. (2023)
[Gaze-Guided Graph Neural Network for Action Anticipation Conditioned on Intention](#)
under review
- [3] **Rong, Y.***, Wei, S.*, Lin, T., Wang, Y., Kasneci, E. (2023)
[DynStatF: An Efficient Feature Fusion Strategy for LiDAR 3D Object Detection](#)
In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*
- [4] Leemann, T.*, Kirchhof M.*, **Rong, Y**, Kasneci E., Kasneci, G. (2023)
[When are Post-hoc Conceptual Explanations Identifiable?](#)
In *Proceedings of The 39th Conference on Uncertainty in Artificial Intelligence (UAI)*.
- [5] **Rong, Y.**, Leemann, T., Nguyen, T., Fiedler, L., Qian, P., Unhelkar, V., Seidel, T., Kasneci, G., & Kasneci, E. (2022)
[Towards Human-centered Explainable AI: User Studies for Model Explanations](#)
under review

- [6] **Rong, Y.***, Leemann, T.*, Borisov, V., Kaneci, G., & Kasneci, E. (2022)
[Evaluating feature attribution: An information-theoretic perspective](#)
 In *Proceedings of the 39th International Conference on Machine Learning (ICML)*
- [7] **Rong, Y.**, Kassautzki, N.-R., Fuhl, W., & Kasneci, E. (2022)
[Where and what: Driver attention-based object detection](#)
 In *Proceedings of the ACM on Human-Computer Interaction (PACMHCI)*
- [8] **Rong, Y.**, Castner, N., Bozkir, E., & Kasneci, E. (2022)
[User Trust on an Explainable AI-based Medical Diagnosis Support System](#)
TRAIT at Conference on Human Factors in Computing Systems (CHI-TRAIT)
- [9] **Rong, Y.**, Xu, W., Akata, Z., & Kasneci, E. (2021)
[Human attention in fine-grained classification](#)
 In *2021 British Machine Vision Conference (BMVC)*
- [10] **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)
- [11] **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)*
- [12] Köpüklü, 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)*.
- [13] 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)*
- [14] 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)*
- [15] Köpüklü, 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 EXPERIENCE

Doctoral Researcher, 2023.04 - present

- Enhancing Model Interpretability and Competence Through Human Knowledge Integration
- at the research group [HCTL \(Human-Centered Technologies for Learning\)](#), TU Munich
- Adviser: [Prof.Dr. Enkelejda Kasneci](#)

Joint Research Project, 2023.02 - present

- Explaining Image Classification Models by Estimating Expertise of Users
- with the research group [HCAIR \(Human-Centered AI and Robotics\)](#), Rice University
- Adviser: [Dr. Vaibhav Unhelkar](#)

Visiting Scholar, 2022.09 - 2023.03

- Efficient Graph Neural Network Explanation Generation
- at [D2K Lab, Rice University](#)

- Adviser: [Dr. Xia Hu](#)

Doctoral Researcher, 2019.09 - 2023.03

- Human Attention in Computer Vision Applications
- at the research group [HCI \(Human-Computer Interaction\)](#), University of Tübingen
- Adviser: [Prof.Dr. Enkelejda Kasneci](#)

Joint Research Project, 2020.09 - 2021.06

- Human Attention in Fine-grained Classification Tasks
- with the research group [EML \(Explainable Machine Learning\)](#), University of Tübingen
- Adviser: [Prof.Dr. Zeynep Akata](#)

Research Project, 2019

- Channel Multiplexing Module Design
- at the research group [Integrated Systems](#), TU Munich

Research Project, 2018

- Gait Recognition Using a Neural Network Autoencoder
- at the research group [Human-Machine Communication](#), TU Munich

TEACHING
EXPERIENCE

Teaching Assistant & Guest Lecturer

- Postgraduate course on *Human-AI Interaction*, TU Munich, 2023
- Postgraduate course on *Human-AI Interaction*, University of Tübingen, 2022
- Postgraduate seminar on *Advanced Topics in Human-Computer Interaction*, University of Tübingen, 2021
- Graduate seminar on *Introductory Topics in Human-Computer Interaction*, University of Tübingen, 2020
- Postgraduate course on *Multimodal Human-Computer Interaction*, University of Tübingen, 2020
- Postgraduate course on *SystemC*, TU Munich, 2018

Selected Mentorship

- Young Academia Project at TU Munich, Team *Tick Talker*, ongoing
- Isabel Schorr, Mira Trouvain, Postgraduate students at TU Munich. Interdisciplinary project *Simulating Human-centered User Experience in XAI using LLMs*, ongoing
- Mohammed Abbas Ansari, Undergraduate student at Jamia Millia Islamia, India. *ASD classification based on visual scanpath using LLMs*, 2023
- Thai Trang Nguyen, Postgraduate student at University of Tübingen. *Model Faithfulness and Preconceptions in Subjective Ratings of Explanations*, 2023
- Jacqueline Hirsch, Postgraduate student at University of Tübingen. *Improving Interactive Medical Support System Performance with Knowledge Distillation*, 2022
- Naemi Rebecca Kassautzki, Postgraduate student at University of Tübingen. *Driver Attention-based Object Detection*, 2022
- David Scheerer, Postgraduate student at University of Tübingen. *Faithful Attention Explanation: Verbalizing Classification Decisions Based on Model Explanation*, 2021

PROFESSIONAL
SERVICE

Conference Organizing Committee

- Diversity & Inclusion Chair at [ACM Symposium on Eye Tracking Research and Applications \(ETRA\) 2023](#)
- Diversity & Inclusion Chair at [ACM Symposium on Eye Tracking Research and Applications \(ETRA\) 2022](#)

Student Advisory Service

- at the Department of Computer Science, University of Tübingen, 2020 – 2022

Reviewer

- at ICML, NeurIPS, AISTATS, TNNLS, WACV, ACM MM, etc.

HONORS, AWARDS & GRANTS	<p>Travel grant from Cluster of Excellence - Machine Learning, Tübingen, 2022</p> <p>Master study <i>passed with distinction</i>, TU Munich, 2019</p> <p>First Prize of the College-students Design Competition of Electrical System, DELPHI Technologies, China, 2015</p> <p>Student Scholarships awarded by Tongji University, China, 2013-2015</p>
SKILLS	<p>Languages</p> <ul style="list-style-type: none"> • English (fluent), German (fluent), Chinese (native) <p>Programming Languages</p> <ul style="list-style-type: none"> • Python, C, C++, Java, Matlab <p>Tools & Libraries</p> <ul style="list-style-type: none"> • Pytorch, Tensorflow, TeX, OpenCV, JFace, SWT, Verilog, etc.
REFERENCES	<p>Enkelejda Kasneci, Professor Department of Educational Sciences Technical University of Munich enkelejda.kasneci@tum.de</p> <p>Gjergji Kasneci, Professor Department of Governance Technical University of Munich gjergji.kasneci@tum.de</p> <p>Xia Hu, Associate Professor Department of Computer Science Rice University xia.hu@rice.edu</p>