

## Desen Yuan

Chengdu, China — desenyuan@gmail.com — (86) 17882391782 — homepage

### EDUCATION

---

#### Master of Communications Engineering

University of Electronic Science and Technology of China 2020.9 - 2023.6

During this period, I achieved a GPA of 2.59/4.0 (71.25/100), received a first-class academic award (top 15%), a second-class scholarship, and was mentored by Qingbo Wu.

#### Bachelor of Communications Engineering

Chongqing University of Posts and Telecommunications 2016.9 - 2020.6

During this period, I achieved a GPA of 2.96/4.0 (79.67/100), received multiple Science and Innovation Scholarships, won the grand prize in the Chongqing regional competition of the 16th 'Challenge Cup' National College Students' Extracurricular Academic Science and Technology Competition, and a second prize at the national finals. I also received the Chongqing Municipal Government Patent Award and was granted direct admission without examination to pursue a master's degree, a privilege reserved for the top 3% of students across the university. My supervisors are Chenqiang Gao and Jiangping Huang.

### EMPLOYMENT

---

#### Algorithm Engineer

ASR Microelectronics Co., Ltd. 2023.7 - Now

Video encoding and decoding, low-level computer vision, and the application of large language models (LLMs) on chips.

#### Algorithm Engineer

China Telecom Beijing Research Institute 2022.4 - 2022.10

My research focuses on attack and defense tasks for visual question answering. I conduct adversarial attacks in scenarios with language biases and in normal contexts to assess and analyze the robustness of models. Additionally, I have proposed a targeted feature-invariant self-distillation adversarial training method.

### PUBLICATIONS

---

#### Published

1. Desen, Yuan. "Balancing Easy and Hard Distortions: A Multi-Rate Knowledge Distillation Strategy for Blind Image Quality Assessment." ICASSP 2024-2024 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). IEEE, 2024.
2. Desen Yuan, Lei Wang, Qingbo Wu, Fanman Meng, King Ngi Ngan, and Linfeng Xu. "Language bias-driven self-knowledge distillation with generalization uncertainty for reducing language bias in visual question answering." Applied Sciences 12, no. 15 (2022): 7588.
3. Desen Yuan, Xiuqing Liu, Qingbo Wu, Hongliang Li, Fanman Meng, Qingyi Yan, Linfeng Xu. Visual Question Answering Method Based on Counterfactual Thinking. Computer Science 49 (12), 229-235
4. Jiangping Huang, Chunli Xiang, Shuwei Yuan, Desen Yuan, and Xiaorui Huang. "Character-aware convolutional recurrent networks with self-attention for emotion detection on Twitter." In 2019 International Joint Conference on Neural Networks (IJCNN), pp. 1-8. IEEE, 2019.

#### Preprints

1. Desen, Yuan. "Language bias in visual question answering: A survey and taxonomy." arXiv preprint arXiv:2111.08531 (2021).
2. Lei Wang, Qingbo Wu, Desen Yuan, King Ngi Ngan, Hongliang Li, Fanman Meng, and Linfeng Xu. "Learning with Noisy Low-Cost MOS for Image Quality Assessment via Dual-Bias Calibration." arXiv preprint arXiv:2311.15846 (2023).
3. Lei Wang, and Desen Yuan. "Perceptual Constancy Constrained Single Opinion Score Calibration for Image Quality Assessment." arXiv preprint arXiv:2404.19595 (2024).
4. Lei Wang, and Desen Yuan. "Beyond MOS: Subjective Image Quality Score Preprocessing Method Based on Perceptual Similarity." arXiv preprint arXiv:2404.19666 (2024).
5. Lei Wang, and Desen Yuan. "Causal Perception Inspired Representation Learning for Trustworthy Image Quality Assessment." arXiv preprint arXiv:2404.19567 (2024).