Jiamin Cheng

Email: jiamincheng.k@gmail.com
TEL: +853 6859 4039

Education

Macau University of Science and Technology *Macau S.A.R., China*
Master in Applied Mathematics and Data Science *Sep. 2022 - Present*
Mentor: Prof. Zhanchuan Cai

China Agricultural University *Yantai, China*
Bachelor of Science *Sep. 2020 - Jun. 2022*
Major: Data Science and Big Data Technology

Shandong University *Weihai, China*
Bachelor of Engineering *Sep. 2015 - Jun. 2019*
Major: Marine Resources Development Technology

Research interests

Image enhancement, Image generation, Speech synthesis.

Research experience

Underwater Image Enhancement Based on Retinex Decomposition *Macau S.A.R., China*
Supervisor: Prof. Zhanchuan Cai, MUST *Sep. 2022 - Present*

- Designed a retinex-based method for single underwater image enhancement to solve the quality degradation problems of underwater images, such as color casts, blurring details, and low contrast
- Proposed a new color correction strategy to remove color casts (bluish or greenish) and restore underwater images to genuine color
- The qualitative and quantitative evaluation of the proposed method show superiority in terms of naturalness, visibility, and preservation of edges and texture

Detection of Fake Images Generated by Text-to-Image Models *Macau S.A.R., China*
Supervisor: Prof. Jinyu Tian, MUST *Mar. 2023 - Jun. 2023*

- Extracted unique features from each image generation model, thereby identifying the unique fingerprints that different models leave behind in the fake images they generate
- Designed a fake image classifier to differentiate generated fake images from real images

Style Transfer for Voice Conversion With Non-Parallel Training Data *Macau S.A.R., China*
Supervisor: Prof. Zhanchuan Cai, MUST *Aug. 2023 - Present*

- Proposed a style transfer system to transfer the speaking style of a source speaker to a target speaker who does not possess that style

Peach Disease Detection Based on Deep Learning *Yantai, China*
Bachelor Thesis Research Project, Supervisor: Prof. Lu Jia, CAU *Jan. 2022 - Jun. 2022*

- Designed a DenseNet-based deep learning model for peach disease detection, which achieved a maximum accuracy of 96.08%
- Created a peach disease detection dataset, consisting of 532 images

Skills

Programming MATLAB, Python.
Languages English, Chinese.

Honors

First Prize of Chinese College Mathematics Competition *Dec. 2021*
Third Class Scholarship for Academic Excellence *Dec. 2021*