

DeFeng Zhou

DEEP LEARNING · REINFORCE LEARNING

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Education

SYSU(Sun Yat-sen University)

B.S. IN INTELLIGENT SCIENCE AND TECHNOLOGY

Shenzhen, China

Sept. 2021 - Jul. 2025

- GPA:3.9/4.0 (top 5% of majors in 2021-2022)
- ranking 1st in Image Process, Advanced mathematics, Cognitive Internship
- Supervisor: Shimin Gong

Publication

Deep Reinforcement Learning for IRS-assisted Secure NOMA Transmissions Against Eavesdroppers

IWCMC conference 2024(Accepted)

FIRST AUTHOR

Sept. 2023 - Feb. 2024

- Defeng Zhou, Shimin Gong, Lanhua Li, Bo Gu, Mohsen Guizani

Progressive Network based on Detail Scaling and Texture Extraction: A More General Framework for Image Deraining

Neurocomputing(Accepted)

CO-AUTHOR

June. 2023 - Nov. 2023

- Jiehui Huang, Zhenchao Tang, Xuedong He, Jun Zhou, Defeng Zhou, Yu-Chian Chen, Ph.D

Experience

Reinforcement Learning in Wireless Communication Networks

ShenZhen, China

FIRST AUTHOR

Sep. 2022 - Current

- Innovative proposal:Improvement of channel conditions using intelligent reflective surfaces for security in wireless communication networks (Previous work has been accepted in IWCMC, now delved into the journal work)
- Combining reinforcement learning and numerical optimisation methods for problem solving

Leveraging LLM decision making helps reinforcement learning in Transportation

Shenzhen,China

CO-AUTHOR

March. 2024 - Current

- Replay the Dilu and LLMlight, ready to
- Multi-perspective generalisability experiments, multi-classification experiments, and comparison experiments were conducted to fully demonstrate the validity of multi-dimensional features.
- Disease diagnosis using machine learning methods such as SVM, Kmeans, etc., early diagnosis.

Multimodal voiceprint recognition

ShenZhen, China

PRIMARY AUTHOR

Sep. 2022 - May. 2023

- Innovative proposal of using Wav2vec model to extract sound features, which improves the overall model multi-classification correction.
- Through experimentation, troubleshooting data to identify and solve model overfitting problems, advanced the progress of the project.
- Obtain the relationship between model accuracy and data by comparing experimental results, which improves the interpretability of the model and contributes to proposing a standard for the dataset.

Diagnosis of acoustic diseases based on statistical analysis

Shenzhen,China

EXPERIMENTER

Jun. 2023 - Aug. 2023

- Automated extraction of multi-dimensional features of patient's speech achieved.
- Multi-perspective generalisability experiments, multi-classification experiments, and comparison experiments were conducted to fully demonstrate the validity of multi-dimensional features.
- Disease diagnosis using machine learning methods such as SVM, Kmeans, etc., early diagnosis.

Honors & Awards

INTERNATIONAL

2022 **First Prize**, 12th Asia and Pacific Mathematical Contest in Modeling (Also Best Programming Award and Best New Media Award)

Beijing, China

DOMESTIC

2023	Finalist , LingxiGames Cup(Programming Competition of Sun Yat-sen University in 2022)	GuangZhou, China
2023	Sliver Prize , 13th MathorCup Mathematical Modeling Challenge for Colleges and Universities	Shenzhen,China

SCHOLARSHIP

2022-2023	The Third Prize Scholarship , Sun Yat-sen University 2022-2023 Academic Scholarship	Shenzhen, China
2022-2023	Interdisciplinary Talent Award , Sun Yat-sen University Intelligent Medical Interdisciplinary Talent Training Fund (Only 6 student in the whole college)	Shenzhen, China
2021-2022	Ethics Award , Sun Yat-sen University 2021-2022 Specialized Scholarships	GuangZhou, China
2021-2022	The First Prize Scholarship , Sun Yat-sen University 2021-2022 Academic Scholarship	GuangZhou, China

Skills

Frameworks	PyTorch, TensorFlow, Gyms,scikit-learn
DevTool	Git (version control system), Linux (operating system)
Programming	Python,C/C++, Matlab, LaTeX, HTML, ASM, CAD
Languages	Chinese, English (CET-4, CET-6)