

EDUCATION

Beihang University

Beijing, China

- *Bachelor of Science in Automatic Control*

Sep. 2019 - Present

- **Major Class GPA:** 3.75/4.00
- **Ranking:** top 10%

WORKING EXPERIENCE

Beijing GalaxySpace

Beijing, China

- *Research Assistant, Remote Sensing Image Processing on cloud detection and dehazing*

Jul. 2022 - Present

PUBLICATIONS

- **Jin, Y. Research on LightGBM Default Prediction Algorithm Based on the Slice Sampling Process.** CSTMM, 2022.
- Xu, L., Li, Y., **Jin, Y. Dual Encoder-based Frequency Attention and Global Axial Transformer network.** in submission.
- **Jin, Y.***, Chen, J.*, Huang, L., Tian F. **DFP-Net: Dehazing for Perception.** in submission.
* Equal Contribution

RESEARCH EXPERIENCES

DFP-Net : Dehazing for Perception

Feb. 2022 - Aug. 2022

- Proposed a novel architecture for multiscale feature extracting and representation based on reformulated ASM model.
- Decreased the complexity by more than 10 times compared to SOTA for downstream real-time applications.
- Stressed the interpretability of the algorithm by conducting theoretical analysis and ablation experiments.

Dual Encoder-based Frequency Attention and Global Axial Transformer network

Advisor : Prof. Yang Li

Nov. 2021 - Jun. 2022

- Proposed a Dual Convolution and Multiband Frequency Attention Module based on DCT as the encoder of U-Net.
- Utilized the Gated Axial-Attention Transformer to construct long-distant relevant global features for discrimination.
- Achieved 97.23% accuracy, 0.9913 AUC score on the DRIVE dataset, outperforming state-of-the-art methods.

Doctor-friendly Diagnosis System Based on Retinal Vessel Segmentation Algorithm

Advisor : Prof. Yang Li

Jan. 2021 - Mar. 2022

- Built a website for doctors to upload the original fundus oculi images and get segmentation references online.
- Developed the function of query online, remote consultation as well as dynamic tracking for patients' condition.
- Published software copyright and deployed in TongRen hospital (possessing China's most prestigious Ophthalmology).

Slice-Sampling: An Approximate Equivalence to Integrated Learning for Dual Forecast

Advisor : Prof. Jingyuan Wang, Prof. Shufan Ji

Oct. 2021 - Feb. 2022

- Simplified the dual forecast problem through retraining on sliced dataset based on AUC optimization.
- Designed a heuristic Slice Sampling Algorithm to fine-tune the incorrectly sorted positive-negative sample pairs.
- Analyzed the similarities between multi-model based Integrated Learning and single-model based proposed method.

Resource Allocation Optimization Against Drought Based on Genetic Algorithm

Advisor : Prof. Lei Wang

Feb. 2022 - Feb. 2022

- Applied Least Squares Fitting and Infinitesimal Calculus to fit the integrated general coefficient.
- Improved the fitness function of GA by introducing a key factor as a divisor to guide the optimizing process.
- Won Meritorious Prize (top 7%) in Mathematical Contest In Modeling, 2022.

Correlation Imaging Based on Global Linear Equivalence and Transformation

Advisor : Prof. Wenling Wang

Mar. 2021 - Aug. 2021

- Transformed the light intensity to image gray scale numerically to simplify the sophisticated light path.
- Introduced the global linear scattering coefficient in the calculating process dynamically for real application.
- Won the outstanding prize (top 1%) of designing Fundamental Physics Experiment in BUAA, 2021.

AWARDS AND HONORS

Remarkable Social Practice Experience First Prize , BUAA	Feb. 2022
Outstanding Performance on Study Scholarship First Prize (top 8%), BUAA	Sep. 2020 & 2021
Outstanding Performance on Subject Competition Scholarship Grand Prize (top 3%), BUAA	Sep. 2020 & 2021
Honor Student of Fengru Academy, BUAA	Sep. 2020

CODING

- **Primary Languages:** C, Python, Java
- **Others:** C++, Matlab