Yiyang Song (宋易洋)

https://nzmzdwdzh.github.io
+86 19818966235
nzmzdwdzh@outlook.com

EDUCATION

Dalian University of Technology (DUT)
International School of Information Science&Engineering

- Major in Software Engineering
- Overall GPA: 92.1 Rank: 3/73
- *Main Course and Score*:

Linear Algebra	96	Probability Theory	96
Discrete Mathematics	95	Data Structures and Algorithms	94
Digital Signal Processing	98	Computer Vision	100

RESEARCH

Supervised by Prof. Miao Zhang, OIP Lab
Field: Salient Object Detection (SOD)

Feature Reintegration over Differential Treatment:
A Top-down and Adaptive Fusion Network for RGB-D Salient Object Detection

- Proposed a top-down multi-level fusion structure. In the top-down pathway, the *Interweave Fusion Module* effectively integrates the global information, while the *Gated Select Fusion Module* discriminatively selects useful local features.
- Designed a *Multi-scale Fusion Module*, special for our top-down architecture, to complement multi-scale features.
- Introduced an adaptive factor that could measure the difficulty of boundaries prediction to balance the BCE Loss with a Boundary-aware Loss

To be submitted to IEEE TCYB

Dynamic Enrich and Refine Network for Light Field Salient Object Detection

- Proposed *Perceptual Guidance Module* to perceive scenes and guide the focal slice to capture conducive features
- Devised a tailored Contrast Refinement Loss to help the model to focus on the salient regions
- Conducted extensive experiments on three Light-Field datasets, proving the proposed network achieves comparable performance over 18 state-of-the-art 2D, 3D, and 4D methods.

To be submitted

PROJECT

CVTG: Computer Vision Testing Ground
http://www.cvtg.club:319

- Test the generalization ability of the thesis model on the web end
- Implemented traditional computer vision algorithms such as Canny and deep learning algorithms such as ResNet
- Convenient for those who are not major in computer vision to obtain the processed images

CHORM: Chord Master for Extracting and Learning Chords

- Separated multi-track music using a neural network with U-Net architecture
- Implemented Music Information Retrieval papers like Google Onsets and Frames
- Light for music lovers to get the transcribed midi file and know the chord

HONOR

First Prize of Liaoning province in Contemporary Undergraduate Mathematical Contest in Modeling

- Modeled an implementation program for ordering and transporting raw materials based on goal programming
- Utilized ARIMA and other algorithms to create four metrics
- Evaluated suppliers by the TOPSIS model based on entropy weight