## Minghao Guo

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minghaoguo20

in Minghao Guo

https://minghaoguo20.github.io/

#### **Education**

2024.08 - now

M.Sc., MBZUAI Computer Vision.

2020.09 - 2024.06

B.S., Zhejiang University Ocean Technology

GPA: 90.19/100 (Rank: 8/142)

2022.09 - 2022.12

**Exchange, The Chinese University of Hong Kong** 

## **Research Experiences**

2023.12 - 2024.05

**Diffusion Model based ENSO Prediction** 

Mentor: Prof. LinChao Zhu @ZJU CCAI lab (graduation thesis project)

We presents an ENSO prediction model combining deep learning and traditional methods, using Diffusion models, Neural Stochastic Differential Equations, and Fourier Neural Operators to improve prediction accuracy and reliability.

2023.07 - 2023.10

■ Diffusion Model based Video Editing

Mentor: Prof. LinChao Zhu @ZJU CCAI lab (intern)

We proposed a diffusion model based video editing method. Given a texture reference image and a video sequence as input, our method can replace the texture of the video with the texture of the reference image while preserving the structure of the video.

2023.02 - 2023.04

**Robust Sentence-Level Evaluation** 

Cooperator: Xiangru Tang, Yilun Zhao @Yale (Remote RA)

To address the issue of hallucinations and factual inconsistencies in long text summary task in current language models, we proposed a set of solutions. The paper is currently under review.

2022.07 - 2022.10

**Underwater Overlapping Fish Detection Study** 

Mentor: *Prof. Hui Huang* @ZJU (SRTP)

Based on yolov5, we perform detection of underwater targets. Our work consists mainly in adding preprocessing, adding attention mechanisms and using pretrained models.

# Miscellaneous Experience

#### **Scholarship**

China Harbor Scholarship, 2022 2022

China National Scholarship (Top 1.4%), 2021 2021

Zhejiang University Scholarship - First Prize (Top 3%), 2021

#### Competition

First Prize of Zhejiang Province Student Physics Innovation, Theory 2022

Third Prize of National Zhou Peiyuan University Mechanics Competition, Individual Compe-2021 tition

First prize in the National University Mathematics Competition, non-mathematics group

# Miscellaneous Experience (continued)

First prize in the National University Mathematics Competition, non-mathematics group