Dongwei Sun(孙冬伟)

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Phone Number(WeChat):(+86) 187-4747-8985
GitHub: github.com/sundongwei
Personal Profile: Male & The Han nationality
Research Area: Remote sensing/Medical Image processing; MultiModal Machine Learning, etc.

Education

Xi'an Jiaotong University — XI'AN, CHINA
Ph.D. in Computer Science, **Doctoral advisor: Xiangyong Cao** — 2023–Current

Northwestern Polytechnical University — XI'AN, CHINA
M.S. in Computational Mathematics, **GPA: 3.60/4.00** — 2018–2021

Inner Mongolia University of Technology — Hohhot, CHINA
B.S. in Computational Mathematics, **GPA: 3.90/4.00** — 2014–2018

- **Recommended Postgraduate(DEPARTMENT RANK:1/85)**
- B.S. in Bachelor of Economics (Double Major)

Experience

20Th Research Institute Of China Electronics Technology Co.,Ltd — XI'AN, CHINA
Assistant Engineer at Department Of Navigation (State Key Laboratory) — 2021.5-2023.3

DeepGlint Technology Co., Ltd — Beijing, CHINA
Internship — 2020.11-2021.4

Publications

[1] **Dongwei Sun**, Y. Bao, and X. Cao, *A lightweight transformer for remote sensing image change captioning*, 2024. arXiv: 2405.06598 [cs.CV].

[2] **Dongwei Sun** and Z. Gao, "Dpanet: Dual pooling attention network for semantic segmentation", *arXiv preprint arXiv:2210.05437*, 2022.

[3] Y. Song, **Dongwei Sun**, and X. Xie, "Active contours driven by gaussian function and adaptive-scale local correntropy-based k-means clustering for fast image segmentation", *Signal Processing*, vol. 174, p. 107 625, 2020.

Skills

- **Programming Languages:** Reasonably familiar with **Python**; Generally familiar with **C++** and **CUDA**
- **Algorithm:** Familiar with several ML/CV algorithms including semantic segmentation,convolutional neural networks and transformer, etc.
- **Deep learning Frameworks:** Proficient in deep learning framework **Pytorch && MXNet**, as well as general purpose libraries including OpenCV, Scikit-learn and Numpy, etc.
- **Operating Systems:** Practiced use Linux (Ubuntu) MacOS Windows
- **Software & Tools:** Mathematica, Matlab, Microsoft Office,LaTeX

Languages

- **English:** Proficient in Oral & Writing & Translation
  - College English Test Band 6: 481
  - College English Test Band 4: 465
- **Published Translations:**
  - A Note on Einstein, Bergmann, and the Fifth Dimension.Science & Culture Review.14(3):76-85,NO.4 2017
  - Kenkichi Iwasawa interview.Mathematics and Birds.Higher Education Press.2020

Projects

1. XX specific object detection based on Yolo with attention
   - An improved YOLO network is proposed for the environment such as high altitude and high intensity light, which not only ensures the requirement of model stable and robust with a fast speed, but also improves the single small object detection capability and meets the real-time requirement.
   - Deploying the model on Nvidia AGX hardware by TensorRT where FPS is 50+/S.
2. Multimodal zero-shot learning on bank dataset
   - The visual model is combined with the language model to achieve two classification multimodal zero-shot learning task on the dataset provided by bank;
   - Testing or fine-tuning on the VTAB (Visual Task Adaptation Benchmark) for continuous optimization.

Scholarships and Awards

- The Outstanding Novice Employee Award[Select only 1 out of 34] 2022
- 2021 Intelligent UAV Racing Championship[The third Prize] 2021
- The 2018&2019 academic year[Major award] 2018–2020
- The 2016&2017&2018 academic year[Major award] 2016–2018
- The 2015 academic year [Third-class award] 2015–2016

PROFESSIONAL SERVICES

- Chinese Conference on Pattern Recognition and Computer Vision(PRCV) Reviewer 2023

Extracurricular Activities

- An contributor to OpenMMLab 2020-Now
  As a contributor to mmcv