

ธีรพงศ์ ปานบุญยืน (Teerapong Panboonyuen)

Senior Research Scientist at MARS (Motor AI Recognition Solution), PostDoc Fellow at Chula
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All about me: <https://kaopanboonyuen.github.io>

งานวิจัยที่สนใจ

Computer Vision and Pattern Recognition; Large Language Models (LLMs); Applied Earth Observations

ประวัติการศึกษา

นักวิจัยหลังปริญญาเอกด้าน AI เพื่อความเข้าใจภาพถ่ายดาวเทียม	2022 - ปัจจุบัน
จุฬาลงกรณ์มหาวิทยาลัย (สังกัด: ภาควิชาวิศวกรรมสำรวจ)	
นักวิจัยหลังปริญญาเอกด้าน AI	2021 - 2022
จุฬาลงกรณ์มหาวิทยาลัย (สังกัด: ภาควิชาวิศวกรรมคอมพิวเตอร์)	
ปริญญาเอก วิศวกรรมคอมพิวเตอร์	2017 - 2020
จุฬาลงกรณ์มหาวิทยาลัย (เกรดเฉลี่ย: 4.00/4.00)	
ปริญญาโท วิศวกรรมคอมพิวเตอร์	2015 - 2016
จุฬาลงกรณ์มหาวิทยาลัย (เกรดเฉลี่ย: 4.00/4.00)	
ปริญญาตรี วิศวกรรมคอมพิวเตอร์	2012 - 2015
พระจอมเกล้าพระนครเหนือ (โควตาเรียนดีเข้าปริญญาตรี)	
โรงเรียนเตรียมวิศวกรรมศาสตร์ (PET21)	2010 - 2012
พระจอมเกล้าพระนครเหนือ (Senior High School, 10th - 12th Grade)	

ประสบการณ์ทำงาน

Senior Research Scientist — Motor AI Recognition Solution (MARS)	2022 - ปัจจุบัน
อาจารย์พิเศษ — วิทยาลัยการคอมพิวเตอร์ มหาวิทยาลัยขอนแก่น	2023 - ปัจจุบัน
นักวิจัยหลังปริญญาเอก — จุฬาลงกรณ์มหาวิทยาลัย	2021 - ปัจจุบัน
นักวิจัยด้าน AI และ Data Science — CJ Express and TILDI	2020 - 2021
Graduate Teaching Assistant — จุฬาลงกรณ์มหาวิทยาลัย	2015 - 2022

รางวัลที่ได้รับ

- H.M. the King Bhumibhol Adulyadej's 72nd Birthday Anniversary Scholarship ([Master](#))
 - The 100th Anniversary Chulalongkorn University Fund for Doctoral Scholarship ([Ph.D.](#))
 - The 90th Anniversary of Chulalongkorn University Scholarship ([Ph.D.](#))
 - Global Young Scientists Summit ([GYSS](#)) Scholarship from Her Royal Highness Princess Maha Chakri Sirindhorn
 - Ratchadapisek Somphot Fund for 2021 Postdoctoral Fellowship, Chulalongkorn University ([PostDoc](#))
 - Ratchadapisek Somphot Fund for 2022 Postdoctoral Fellowship, Chulalongkorn University ([PostDoc](#))
 - Ratchadapisek Somphot Fund for 2023 Postdoctoral Fellowship, Chulalongkorn University ([PostDoc](#))
 - Ratchadapisek Somphot Fund for 2024 Postdoctoral Fellowship, Chulalongkorn University ([PostDoc](#))
 - Ratchadapisek Somphot Fund for 2025 Postdoctoral Fellowship, Chulalongkorn University ([PostDoc](#))
 - Reviewer for International Journals/Conferences: More reviews can be found under [AAO-4985-2020](#).
 - 2017 [Best Student Paper Award](#) in International Conference on Computing and Information Technology
 - 2019 [Best Young Researcher Paper Award](#) in First International Conference on Smart Technology & Urban Development (STUD)
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ผลงานตีพิมพ์ในวารสารวิชาการระดับนานาชาติ

1. [Teerapong Panboonyuen](#), et al. MeViT: A Medium-Resolution Vision Transformer for Semantic Segmentation on Landsat Satellite Imagery for Agriculture in Thailand. Remote Sensing 15.21 (2023): 5124.
 2. [Teerapong Panboonyuen](#), et al. MARS: Mask Attention Refinement with Sequential Quadtree Nodes for Car Damage Instance Segmentation. International Conference on Image Analysis and Processing. Cham: Springer Nature Switzerland, 2023.
 3. [Teerapong Panboonyuen](#), et al. Object Detection of Road Assets Using Transformer-Based YOLOX with Feature Pyramid Decoder on Thai Highway Panorama. Information 13.1 (2022): 5.
 4. [Teerapong Panboonyuen](#), et al. Transformer-Based Decoder Designs for Semantic Segmentation on Remotely Sensed Images. Remote Sensing 13.24 (2021): 5100.
 5. [Teerapong Panboonyuen](#), et al. Semantic Labeling in Remote Sensing Corpora Using Feature FusionBased Enhanced Global Convolutional Network with High-Resolution Representations and Depthwise Atrous Convolution. Remote Sensing 12.8 (2020): 1233.
 6. [Teerapong Panboonyuen](#), et al. Semantic Segmentation on Remotely Sensed Images Using an Enhanced Global Convolutional Network with Channel Attention and Domain Specific Transfer Learning. Remote Sensing 11.1 (2019): 83.
 7. [Teerapong Panboonyuen](#), et al. Road segmentation of remotely-sensed images using deep convolutional neural networks with landscape metrics and conditional random fields. Remote Sensing 9.7 (2017): 680.
 8. [Teerapong Panboonyuen](#), et al. An enhanced deep convolutional encoder-decoder network for road segmentation on aerial imagery. International Conference on Computing and Information Technology. Springer, Cham, 2017.
 9. [Teerapong Panboonyuen](#), et al. Image Vectorization of Road Satellite Data Sets, Journal of Remote Sensing and GIS Association of Thailand (2017)
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10. Wichakam, I., [Teerapong Panboonyuen](#), Udomcharoenchaikit, C., and Vateekul, P. (2018, February). Real-Time Polyps Segmentation for Colonoscopy Video Frames Using Compressed Fully Convolutional Network. In the International Conference on Multimedia Modeling (pp. 393-404). Springer, Cham.
 11. Vajeethaveesin, T., [Teerapong Panboonyuen](#), Lawawironjwong, S., Srestasathiern, P., Jaiyen, S. (2022). A Performance Comparison between GIS-based and Neuron Network Methods for Flood Susceptibility Assessment in Ayutthaya Province. Trends in Sciences, 19(2), 2038-2038.
 12. Vateekul, P., [Teerapong Panboonyuen](#), Lawawirojwong, S., and Srisophon, S. (2017, December). Road map extraction from satellite imagery using connected component analysis and landscape metrics. In 2017 IEEE International Conference on Big Data (Big Data) (pp. 3435-3442). IEEE.
 13. Chantharaj, S., Pornratthanapong, K., Chitsinphayakun, P., [Teerapong Panboonyuen](#), Vateekul, P., Lawawirojwong, S. (2018, July). Semantic Segmentation On Medium-Resolution Satellite Images Using Deep Convolutional Networks With Remote Sensing Derived Indices. In 2018, the 15th International Joint Conference on Computer Science and Software Engineering (JCSSE) (pp. 1-6). IEEE.
 14. Kantavat, P., Hayashi, Y., City, G. S., Kijirikul, B., [Teerapong Panboonyuen](#), Achariyaviriya, W. Transportation Mobility Factor Extraction Using Image Recognition Techniques, First International Conference on Smart Technology & Urban Development (STUD 2019).
 15. Intarat, K.; Rakwatin, P.; [Teerapong Panboonyuen](#) Enhanced Feature Pyramid Vision Transformer for Semantic Segmentation on Thailand Landsat-8 Corpus. Information 2022, 13, 259.
 16. Thitisiriwech, K., [Teerapong Panboonyuen](#), Kantavat, P., Iwahori, Y. and Kijirikul, B., 2022. The Bangkok Urbanscapes Dataset for Semantic Urban Scene Understanding Using Enhanced Encoder-Decoder with Atrous Depthwise Separable A1 Convolutional Neural Networks. IEEE Access.
 17. Thitisiriwech, K., [Teerapong Panboonyuen](#), Kantavat, P., Kijirikul, B., Iwahori, Y., Fukui, S., & Hayashi, Y. (2023). Quality of Life Prediction in Driving Scenes on Thailand Roads Using Information Extraction from Deep Convolutional Neural Networks. Sustainability, 15(3), 2847.
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ผู้ตรวจสอบบทความวิชาการของวารสาร/การประชุมนานาชาติ

Invited Reviewer of Pattern Recognition (Elsevier)
Invited Reviewer of Neurocomputing (Elsevier)
Invited Reviewer of Transactions on Knowledge Discovery from Data (ACM)
Invited Reviewer of Computer Vision and Image Understanding (Elsevier)
Invited Reviewer of Computers and Geosciences (Elsevier)
Invited Reviewer of Remote Sensing (MDPI)
Invited Reviewer of Scientific Reports (Nature Portfolio)
Invited Reviewer of GIScience & Remote Sensing (Taylor & Francis)
Invited Reviewer of European Journal of Remote Sensing (Taylor & Francis)
Invited Reviewer of International Journal of Remote Sensing (Taylor & Francis)
Invited Reviewer of IEEE Transactions on Artificial Intelligence (IEEE)
Invited Reviewer of IEEE Transactions on Image Processing (IEEE)
Invited Reviewer of IEEE Transactions on Medical Imaging (IEEE)
Invited Reviewer of IEEE Transactions on Geoscience and Remote Sensing (IEEE)
Invited Reviewer of IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI) (IEEE)
** More reviews can be found under my [WoS ID AAO-4985-2020](#).

TEERAPONG PANBOONYUEN, PH.D.

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All about me: <https://kaopanboonyuen.github.io>

RESEARCH INTERESTS

- Computer Vision and Pattern Recognition; Large Language Model (LLM); Diffusion Models
- **Tech Toolkit:** Python; PyTorch; TensorFlow; GCP; AWS; GPT; HuggingFace; GenerativeAI; API

EDUCATION

Postdoctoral Visiting Scholar in AI for Understanding Satellite Imagery 2022 - Present
Chulalongkorn University

Research Topic: Land Use and Land Cover (LULC) Using Sequence-to-Sequence Perspective with Transformers

Published a research paper in a Tier 1/Q1 journal

Postdoctoral Researcher in AI 2021 - 2022
Chulalongkorn University

Research Topic: Semantic Labeling in Remote Sensing Corpora Using Convolutional Neural Architectures

Published a research paper in a Tier 1/Q1 journal

Ph.D. in Computer Engineering 2017 - 2020
Chulalongkorn University (GPA: 4.00/4.00)

Dissertation Title: Semantic Segmentation on Remotely Sensed Images Using Deep Convolutional Encoder-Decoder Neural Network (Thesis Evaluation: Very Good)

M.Eng. in Computer Engineering 2015 - 2016
Chulalongkorn University (GPA: 4.00/4.00)

Thesis Title: Semantic Road Segmentation on Remotely-Sensed Images Using Deep Convolutional Neural Networks and Landscape Metrics (Thesis Evaluation: Very Good)

B.Eng. in Computer Engineering 2012 - 2015
KMUTNB (Merit-based Admission Quota)

Thesis Title: Lumbar Spinal Canal Stenosis Classification (Thesis Evaluation: Grade A)

Pre-Engineering School in Pre-Electrical Engineering (PET21) 2010 - 2012
KMUTNB (Senior High School: 10th - 12th Grade)

PROFESSIONAL EXPERIENCE

Senior Research Scientist — Motor AI Recognition Solution (MARS) Jan 2022 - Present

- Pioneered the development of the **MARS** AI model: **M**ask **A**ttention **R**efinement with **S**equential Quadtree Nodes, showcased at ICIAP 2023 in Udine, Italy, and featured in the conference proceedings.
- Initiate and drive new research projects involving AI model development for tasks such as Image Classification, Object Detection, Instance Segmentation, and Explainable AI (XAI). Focus on creating, reproducing, and validating cutting-edge solutions for the auto insurance sector.
- Facilitate the integration of pre-trained models into production by providing APIs for frontend and backend service teams, enhancing car insurance and garage-related operations.
- Explore and create novel models with potential to challenge and redefine existing design paradigms, drawing from top research databases like CVPR, ICLR, ICCV, ECCV, NeurIPS, and PAMI.
- Architect and deploy advanced deep learning solutions for autonomous systems, making significant contributions to the development of self-driving cars, drones, and robotics.
- Develop innovative Pattern Recognition and NLP frameworks using deep learning techniques, revolutionizing language understanding and generating applications with a transformative impact.
- Lead research efforts in creating and authoring influential papers, actively submitting to high-impact journals and conferences, and contributing to the advancement of AI technologies.

- Deliver lectures in the following courses:
 - **SC310005 Artificial Intelligence and Machine Learning Application:** Covering foundational AI and ML concepts along with their practical applications.
 - **CP020002 Smart Process Management:** Focusing on strategies for optimizing and automating business processes.
 - **SC320002 Business Intelligence:** Teaching techniques for data analysis and decision-making in business contexts.
 - **CP020001 Introduction to Computers and Programming:** Introducing students to computer systems and fundamental programming skills.
- Develop and refine course materials, including syllabi, assignments, and assessments, to ensure a comprehensive educational experience in each subject.
- Contributed to the academic community through the Ministerial Order on the Appointment of Academic Staff (**Order 5907-2566**) and received two Invitation Letters for Special Lecturer Positions (**Orders 660301.26/24844 and 660101.26/13320**).

Dept. of Survey Engineering — Chulalongkorn University*July 2022 - Present*

- My postdoc research focused on designing and providing an alternative perspective by treating LULC as a sequence-to-sequence prediction task on remote sensing corpora.
- Supervisors: Chalermchon Satirapod and Chaityut Charoenphon

AI Research Scientist (Department Manager) — CJ Express and TILDI*Nov 2020 - Aug 2021*

- Apply Data Science and AI technology (PySpark, Deep Learning) in Barter for Demand Forecasting in Retail Grocery Stores.
- Working as Artificial Intelligence Researcher with Machine Learning, Big Data Solutions; Hadoop, PySpark for Demand Forecasting Project via Data Innovation Team.
- Fine-Grained Time Series Forecasting at Scale with PySpark, Deep Learning, and Visualizing Demand Seasonality.
- Artificial Intelligence Research Scientist (Department Manager), C.J. Express Group Co., Ltd., Office Silom

Dept. of Computer Engineering — Chulalongkorn University*Sep 2015 - Apr 2022*

Postdoctoral Researcher, Ph.D./M.Eng. Candidate

- I focus on designing deep encoder-decoder networks for semantic segmentation of satellite imagery. My passion is at the intersection of Remote Sensing, Computer Vision, and Machine Learning. Proud member of the Machine Intelligence and Knowledge Discovery Lab (MIND Lab).

- My PostDoc Research (Full Paper, 2021): <https://www.mdpi.com/2072-4292/13/24/5100>
- My Publication Dissertation (Full Text, 2020): <http://cuir.car.chula.ac.th/handle/123456789/70297>
- My Publication Thesis (Full Text, 2016): <http://cuir.car.chula.ac.th/handle/123456789/55593>
- Supervisors: Peerapon Vateekul and Siam Lawawirojwong

Graduate Teaching Assistant — Chulalongkorn University*Sep 2015 - Apr 2022*

Co-taught the annual machine learning course for undergrads and grads.

- Updated the syllabus to feature hands-on Python programming experience.

- 2140101 Computer Programming (Java, ISE, Chulalongkorn University)
- 2110101 Computer Programming (Python, 1st year bachelor of Faculty of Engineering)
- 2110627 Big Data Tools (Master Student)
- 2110446 Data Science and Data Engineering (3rd-year bachelor of Computer Engineering)
- (Online Course, Head TA) Intro to Data Analytics and Big Data (<https://mooc.chula.ac.th>)
- (Online Course, Head TA) Practical Data Analytics Using Rapid Miner (<https://mooc.chula.ac.th>)

- Conducted cutting-edge AI research under Siam Lawawirojwong's laboratory.
- Led the development of an automated land-use/land-cover (LULC) classification map production system using deep learning.
- Pioneered a multi-class deep learning approach for LULC classification of LANDSAT-8 satellite images.
- Developed a deep learning-based system for forest fire classification in LANDSAT-8 satellite imagery.

I served as the Head TA for the data science pathway team at Chula MOOC, where I spearheaded Volunteer Teaching in Practical Data Analytics. I utilized RapidMiner and Python to deliver hands-on learning experiences, helping students gain practical skills and knowledge in the field.

AWARDS AND HONORS

- Best Student Paper Award in International Conference on Computing and Information Technology 2017
- Best Young Researcher Paper Award in First International Conference on Smart Technology and Urban Development (STUD 2019)
- H.M. the King Bhumibhol Adulyadej's 72nd Birthday Anniversary Scholarship (Master)
- The 100th Anniversary Chulalongkorn University Fund for Doctoral Scholarship (Ph.D.)
- The 90th Anniversary of Chulalongkorn University Scholarship (Ph.D.)
- Ratchadapisek Somphot Fund for 2021 Postdoctoral Fellowship, Chulalongkorn University (PostDoc)
- Ratchadapisek Somphot Fund for 2022 Postdoctoral Fellowship, Chulalongkorn University (PostDoc)
- Ratchadapisek Somphot Fund for 2023 Postdoctoral Fellowship, Chulalongkorn University (PostDoc)
- Ratchadapisek Somphot Fund for 2024 Postdoctoral Fellowship, Chulalongkorn University (PostDoc)
- Ratchadapisek Somphot Fund for 2025 Postdoctoral Fellowship, Chulalongkorn University (PostDoc)
- Reviewer for International Journals/Conferences (ISI, Scopus, DBLP, etc.)

REFEREED PUBLICATIONS

1. **Panboonyuen, Teerapong**, et al. MeViT: A Medium-Resolution Vision Transformer for Semantic Segmentation on Landsat Satellite Imagery for Agriculture in Thailand. *Remote Sensing* 15.21 (2023): 5124.
2. **Panboonyuen, Teerapong**, et al. MARS: Mask Attention Refinement with Sequential Quadtree Nodes for Car Damage Instance Segmentation. *International Conference on Image Analysis and Processing*. Cham: Springer Nature Switzerland, 2023.
3. **Panboonyuen, Teerapong**, et al. Object Detection of Road Assets Using Transformer-Based YOLOX with Feature Pyramid Decoder on Thai Highway Panorama. *Information* 13.1 (2022): 5.
4. **Panboonyuen, Teerapong**, et al. Transformer-Based Decoder Designs for Semantic Segmentation on Remotely Sensed Images. *Remote Sensing* 13.24 (2021): 5100.
5. **Panboonyuen, Teerapong**, et al. Semantic Labeling in Remote Sensing Corpora Using Feature Fusion-Based Enhanced Global Convolutional Network with High-Resolution Representations and Depthwise Atrous Convolution. *Remote Sensing* 12.8 (2020): 1233.
6. **Panboonyuen, Teerapong**, et al. Semantic Segmentation on Remotely Sensed Images Using an Enhanced Global Convolutional Network with Channel Attention and Domain Specific Transfer Learning. *Remote Sensing* 11.1 (2019): 83.
7. **Panboonyuen, Teerapong**, et al. Road segmentation of remotely-sensed images using deep convolutional neural networks with landscape metrics and conditional random fields. *Remote Sensing* 9.7 (2017): 680.
8. **Panboonyuen, Teerapong**, et al. An enhanced deep convolutional encoder-decoder network for road segmentation on aerial imagery. *International Conference on Computing and Information Technology*. Springer, Cham, 2017.

9. **Panboonyuen, Teerapong**, et al. Image Vectorization of Road Satellite Data Sets, *Journal of Remote Sensing and GIS Association of Thailand* (2017)
10. Wichakam, I., **Panboonyuen, T.**, Udomcharoenchaikit, C., and Vateekul, P. (2018, February). Real-Time Polyps Segmentation for Colonoscopy Video Frames Using Compressed Fully Convolutional Network. In *International Conference on Multimedia Modeling* (pp. 393-404). Springer, Cham.
11. Vajeethaveesin, T., **Panboonyuen, T.**, Lawawironjwong, S., Srestasathiern, P., Jaiyen, S., & Jitkajornwanich, K. (2022). A Performance Comparison between GIS-based and Neuron Network Methods for Flood Susceptibility Assessment in Ayutthaya Province. *Trends in Sciences*, 19(2), 2038-2038.
12. Jitkajornwanich, K., Vateekul, P., **Panboonyuen, T.**, Lawawirojwong, S., and Srisonphan, S. (2017, December). Road map extraction from satellite imagery using connected component analysis and landscape metrics. In *2017 IEEE International Conference on Big Data (Big Data)* (pp. 3435-3442). IEEE.
13. Chantharaj, S., Pornratthanapong, K., Chitsinphayakun, P., **Panboonyuen, T.**, Vateekul, P., Lawavironjwong, S., ... & Jitkajornwanich, K. (2018, July). Semantic Segmentation On Medium-Resolution Satellite Images Using Deep Convolutional Networks With Remote Sensing Derived Indices. In *2018, the, the 15th International Joint Conference on Computer Science and Software Engineering (JCSSE)* (pp. 1-6). IEEE.
14. Kantavat, P., Hayashi, Y., City, G. S., Kijirikul, B., **Panboonyuen, T.**, Achariyaviriya, W., ... & Vateekul, P. Transportation Mobility Factor Extraction Using Image Recognition Techniques, *First International Conference on Smart Technology & Urban Development (STUD 2019)*.
15. Intarat, K.; Rakwatin, P.; **Panboonyuen, T.** Enhanced Feature Pyramid Vision Transformer for Semantic Segmentation on Thailand Landsat-8 Corpus. *Information* 2022, 13, 259.
16. Thitisiriwech, K., **Panboonyuen, T.**, Kantavat, P., Iwahori, Y. and Kijirikul, B., 2022. The Bangkok Urbanscapes Dataset for Semantic Urban Scene Understanding Using Enhanced Encoder-Decoder with Atrous Depthwise Separable A1 Convolutional Neural Networks. *IEEE Access*.
17. Thitisiriwech, K., **Panboonyuen, T.**, Kantavat, P., Kijirikul, B., Iwahori, Y., Fukui, S., & Hayashi, Y. (2023). Quality of Life Prediction in Driving Scenes on Thailand Roads Using Information Extraction from Deep Convolutional Neural Networks. *Sustainability*, 15(3), 2847.

PROFESSIONAL SERVICE

- Invited Reviewer of *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*
- Invited Reviewer of *IEEE Transactions on Geoscience and Remote Sensing* (Publisher: IEEE)
- Invited Reviewer of *IEEE Transactions on Industrial Informatics* (Publisher: IEEE)
- Invited Reviewer of *IEEE Transactions on Artificial Intelligence* (Publisher: IEEE)
- Invited Reviewer of *IEEE Transactions on Emerging Topics in Computational Intelligence* (Publisher: IEEE)
- Invited Reviewer of *Pattern Recognition* (Publisher: Elsevier)
- Invited Reviewer of *Neurocomputing* (Publisher: Elsevier)
- Invited Reviewer of *Scientific Reports* (Publisher: Nature)
- Invited Reviewer of *Computer Vision and Image Understanding* (Publisher: Elsevier)
- Invited Reviewer of *Remote Sensing* (Publisher: MDPI)
- Invited Reviewer of *PLOS ONE* (Publisher: Public Library of Science)
- Invited Reviewer of *Computers and Geosciences* (Publisher: Elsevier)
- Invited Reviewer of *Forests* (Publisher: MDPI)
- Invited Reviewer of *International Journal of Remote Sensing* (Publisher: Taylor and Francis)
- Invited Reviewer of *IEEE Access* (Publisher: IEEE)
- Invited Reviewer of *International Journal of Image and Data Fusion* (Publisher: Taylor and Francis)
- Invited Reviewer of *International Journal of Distributed Sensor Networks* (Publisher: Hindawi)
- Invited Reviewer of *International Journal of Imaging Systems and Technology* (Publisher: Wiley)

- Invited Reviewer of International Journal of Digital Earth (Publisher: Taylor and Francis)
- Invited Reviewer of International Journal of Pavement Engineering (Publisher: Taylor and Francis)
- Invited Reviewer of International Journal of Food Properties (Publisher: Taylor and Francis)
- Invited Reviewer of IEEE Transactions on Radiation and Plasma Medical Sciences (Publisher: IEEE)
- Invited Reviewer of IEEE Transactions on Vehicular Technology (Publisher: IEEE)
- Invited Reviewer of IEEE Transactions on Human-Machine Systems (Publisher: IEEE)
- Invited Reviewer of IEEE Transactions on Circuits and Systems for Video Technology (Publisher: IEEE)
- Invited Reviewer of IEEE Sensors Journal (Publisher: IEEE)
- Invited Reviewer of IEEE Intelligent Systems (Publisher: IEEE)
- Invited Reviewer of IET Image Processing (Publisher: IET)
- Invited Reviewer of Geo-spatial Information Science (Publisher: Taylor and Francis)
- Invited Reviewer of Sensors (Publisher: MDPI)
- Invited Reviewer of Computational Intelligence and Neuroscience (Publisher: Hindawi)
- Invited Reviewer of Computer Methods in Biomechanics and Biomedical Engineering
- Invited Reviewer of Mathematical Problems in Engineering (Publisher: Hindawi)
- Invited Reviewer of Journal of Spatial Science (Publisher: Taylor and Francis)
- Invited Reviewer of Journal of Healthcare Engineering (Publisher: Hindawi Limited)
- Invited Reviewer of IETE Technical Review (Publisher: IETE)
- Invited Reviewer of IETE Journal of Research (Publisher: IETE)
- Invited Reviewer of Transactions in GIS (Publisher: Wiley-Blackwell)
- Invited Reviewer of Transactions on Network Science and Engineering (Publisher: IEEE)
- Invited Reviewer of Connection Science (Publisher: Taylor and Francis)
- Invited Reviewer of Industrial Lubrication and Tribology (Publisher: Emerald Group Publishing Ltd.)
- Invited Reviewer of Transactions on Consumer Electronics (Publisher: IEEE)
- Invited Reviewer of Imaging Science Journal (Publisher: Maney Publishing)
- Invited Reviewer of Cybernetics and Systems (Publisher: Taylor and Francis)
- Invited Reviewer of Open Geosciences (Publisher: De Gruyter)
- Invited Reviewer of Geocarto International (Publisher: Taylor and Francis)
- Invited Reviewer of Engineering Reports (Publisher: Wiley)
- Invited Reviewer of Journal of Agricultural Engineering (Publisher: Springer)

SKILLS

Computer Languages	Python, Java, Processing, C, R, MATLAB, Golang
Tech Stack	GCP, AWS, Docker-Compose, Streamlit
Software & Tools	Git, RapidMiner Studio, Looker Studio, Tableau, Power BI
Machine Learning Libraries	Pytorch, TensorFlow and Keras, Theano, Pandas, Scikit-Learn
Other Libraries	Hugging Face, Gradio, GDAL, Beautiful Soup and Selenium, Plotly
Model Evaluation	Weights and Biases (WandB), TensorBoard, Streamlit
GitHub	https://github.com/kaopanboonyuen

WHO AM I

©2024 I'm Teerapong Panboonyuen, but you can also call me Kao Panboonyuen or simply Kao.

in Thai: ธีรพงศ์ ปานบุญยืน (เก้า)

Teerapong Panboonyuen

<https://www.webofscience.com/wos/author/rid/AAO-4985-2020>
Web of Science ResearcherID: [AAO-4985-2020](#)
ORCID: 0000-0001-8464-4476

Publication Metrics

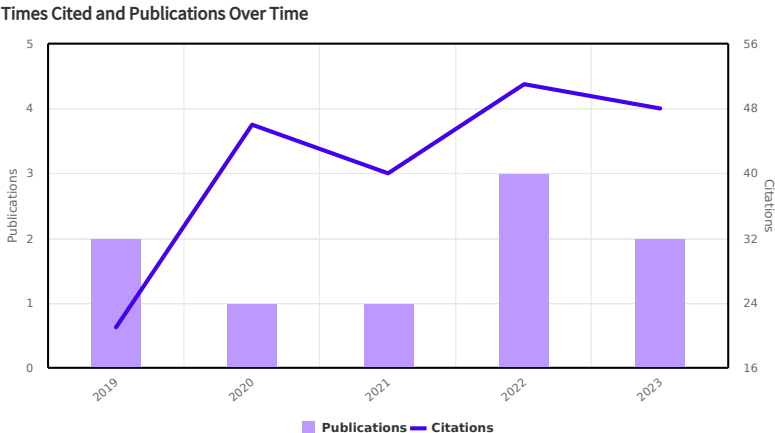
For manuscripts published from date range August 2019 - August 2024

4	66
H-index	Sum of Times Cited
9	8
Total Publications	Web of Science Core Collection Publications

For all time

6	251
H-index	Sum of Times Cited
14	13
Total Publications	Web of Science Core Collection Publications
1	
Sum of Times Cited by Patents	

Publication Impact Over Time



Publishing Summary

For manuscripts published from date range August 2019 - August 2024

(3) Remote Sensing	(2) Information
(1) Sustainability	(1) IEEE Access
(1) First International Conference on...	(1) ArXiv

Publications

For manuscripts published from date range August 2019 - August 2024 (8)

Times Cited
(All time)

MeViT: A Medium-Resolution Vision Transformer for Semantic Segmentation on Landsat Satellite Imagery for Agriculture in Thailand Published: Nov 2023 in Remote Sensing DOI: 10.3390/RS15215124	0
Quality of Life Prediction in Driving Scenes on Thailand Roads Using Information Extraction from Deep Convolutional Neural Networks Published: Feb 2023 in Sustainability DOI: 10.3390/SU15032847	2
Enhanced Feature Pyramid Vision Transformer for Semantic Segmentation on Thailand Landsat-8 Corpus Published: May 2022 in Information DOI: 10.3390/INFO13050259	1
Object Detection of Road Assets Using Transformer-Based YOLOX with Feature Pyramid Decoder on Thai Highway Panorama Published: Jan 2022 in Information DOI: 10.3390/INFO13010005	9
The Bangkok Urbanscapes Dataset for Semantic Urban Scene Understanding Using Enhanced Encoder-Decoder With Atrous Depthwise Separable A1 Convolutional Neural Networks Published: 2022 in IEEE Access DOI: 10.1109/ACCESS.2022.3176712	5
Transformer-Based Decoder Designs for Semantic Segmentation on Remotely Sensed Images Published: Dec 2021 in Remote Sensing DOI: 10.3390/RS13245100	37
Semantic Labeling in Remote Sensing Corpora Using Feature Fusion-Based Enhanced Global Convolutional Network with High-Resolution Representations and Depthwise Atrous Convolution Published: Apr 2020 in Remote Sensing DOI: 10.3390/RS12081233	8

Preprints

For preprints published from date range August 2019 - August 2024 (1)

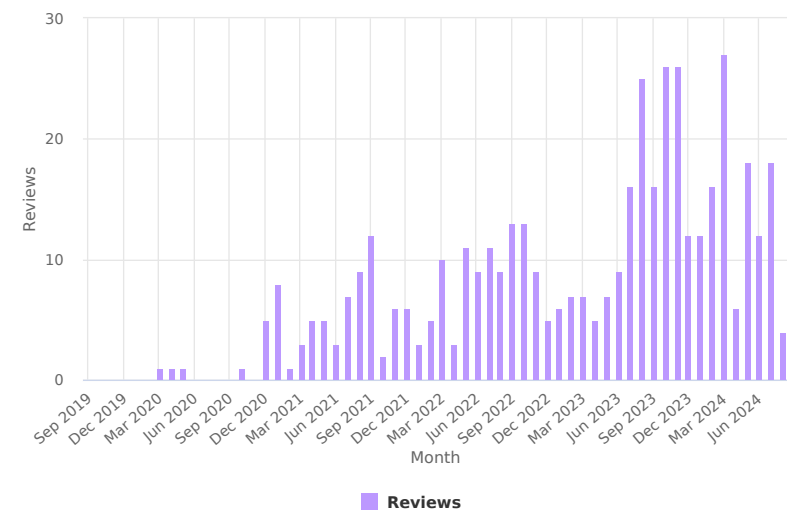
Times Cited
(All time)

MARS: Mask Attention Refinement with Sequential Quadtree Nodes for Car Damage Instance Segmentation
Authors (6): Panboonyuen, Teerapong; Nithisopa, Naphat ... Pornwiriyakul, Naruepon
Published: May 2023
Accession Number: PPRN:68557093

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Verified Reviews

Review Summary



Reviewer Summary

For manuscripts reviewed from date range August 2019 - August 2024

(80) International Journal of Remote...	(65) IEEE Access
(27) IET Image Processing	(18) IEEE Transactions on Emerging ...
(12) International Journal of Digital ...	(10) IEEE Sensors Journal
(9) Canadian Journal of Remote Sen...	(8) IET Computer Vision
(8) Plos One	(7) European Journal of Remote Sen...

(7) Connection Science	(6) Remote Sensing
(6) IEEE Transactions on Medical Im...	(6) IEEE Transactions on Industrial In...
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(5) Measurement Science and Techn...	(5) Journal of Spatial Science
(5) IEEE Transactions on Radiation a...	(5) Remote Sensing Letters
(4) Mathematics	(4) IEEE Transactions on Intelligent T...
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(3) IEEE Transactions on Information...	(3) International Journal of Imaging ...
(3) Electronics Letters	(3) International Journal of Image an...
(3) IEEE Sensors Letters	(2) Network: Computation in Neural ...
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(2) The Imaging Science Journal	(2) IEEE Transactions on Medical Ro...
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(2) Industrial Lubrication and Tribolo...	(2) Computer Methods in Biomecha...
(1) Agronomy	(1) Machine Intelligence Research
(1) Journal of Medical Engineering a...	(1) Symmetry
(1) IEEE Photonics Journal	(1) Canadian Journal of Civil Engine...
(1) Engineering Research Express	(1) Food Bioengineering
(1) Biomedical Physics & Engineerin...	(1) ACM Transactions on Intelligent S...
(1) Journal of Vibration and Control	(1) IEEE Transactions on Mobile Com...
(1) Concurrency and Computation: ...	(1) Ultrasonic Imaging
(1) Composites and Advanced Mater...	(1) IEEE Transactions on Fuzzy Syste...
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(1) Progress in Physical Geography	(1) Interpretation

(1) Computer Methods in Biomecha...	(1) IEEE Transactions on Pattern Ana...
(1) Artificial Intelligence for Enginee...	(1) Cybernetics & Systems
(1) CyTA - Journal of Food	(1) IEEE Transactions on Reliability
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(1) Engineered Science	(1) Engenharia Agricola
(1) International Journal of Food Pro...	(1) International Journal of Pavemen...
(1) IEEE Photonics Technology Letters	(1) Applied AI Letters
(1) IEEE Signal Processing Letters	(1) IEEE Transactions on Circuits and...
(1) IEEE Transactions on Computatio...	(1) Applied Sciences
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(1) Journal of Marine Science and E...	(1) Journal of Agricultural Engineeri...
(1) Land Degradation & Development	(1) CSEE Journal of Power and Energ...
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(1) IEEE Transactions on Neural Syst...	(1) Big Data and Cognitive Computi...
(1) Robotica	(1) Microscopy Research and Techni...
(1) IEEE Transactions on Consumer ...	(1) The Journal of Engineering
(1) Computational Intelligence	(1) IEEE Network Magazine
(1) IEEE Transactions on Network Sci...	(1) IETE Journal of Research
(1) IETE Technical Review	(1) International Journal of Distribut...
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A Hybrid Segmentation Algorithm for Rheumatoid Arthritis Diagnosis Using X-Ray Images
Reviewed: Aug 2024 for Big Data and Cognitive Computing

Substation Safety Distance Monitoring Based on Keypoint Detection and Perspective Geometry
Reviewed: Aug 2024 for IEEE Transactions on Power Delivery

An Enhanced Deep Learning Approach for Intelligent Healthcare Emotion Analysis Using Facial Expressions and Feature Analysis to Identify Pain
Reviewed: Aug 2024 for Robotica

OccFaçade: Enabling Precise Building Façade Parsing in Large Urban Scenes with Occlusion
Reviewed: Aug 2024 for International Journal of Remote Sensing

CellSAM: Advancing Pathologic Image Cell Segmentation via Asymmetric Large-Scale Vision Model Feature Distillation Aggregation Network

Reviewed: Jul 2024 for Microscopy Research and Technique

DLB-CNet: Difference Learning-Based Convolution Network for Building Change Detection
5 rounds from May 2024 to Jul 2024 for IEEE Transactions on Very Large Scale Integration (VLSI) Systems

Extraction of crop row navigation lines for soybean seedlings based on calculation of average pixel point coordinates

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AFOcc: Multi-Modal Semantic Occupancy Prediction with Accurate Fusion

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MammoSegNet: A Convolutional Network Analysis for Segmenting Tumor Tissue Masses in Digital Mammograms of Breast Cancer Patients

Reviewed: Jul 2024 for Machine Intelligence Research

Enhanced Satellite Imagery Analysis for Post-Disaster Building Damage Assessment Using Integrated ResNet-U-Net Model

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Defect characterization of x-ray micro-CT images of PBX using CNN and image processing method

Reviewed: Jul 2024 for Nuclear Science and Techniques

ECG waveform components' delineation utilizing an encoder-decoder architecture and a post-process algorithm

Reviewed: Jul 2024 for Journal of Medical Engineering and Technology

Image Processing of Signature Verification using Multitask Multi Attention Residual Shrinkage Convolutional Neural Network

Reviewed: Jul 2024 for ACM Transactions on Knowledge Discovery from Data

LTSCD-YOLO : A Lightweight Algorithm for Detecting Typical Satellite Components Based on Improved YOLOv8

2 rounds from May 2024 to Jul 2024 for Remote Sensing

An attention-based multiscale few-shot network for water body extraction from GF-2 satellite imagery

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FMCNet : A Fuzzy Multiscale Convolution Network for Remote Sensing Image Segmentation

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A Hybrid Attention Mechanism and RepGFPN Method for Detecting Wall Cracks in High-Altitude Cleaning Robots

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A Multi-Resolution Spatiotemporal Semantic Learning Approach for Origin-Destination Prediction

Reviewed: Jul 2024 for IEEE Intelligent Transportation Systems Magazine

Utilizing Deep Learning Models and LiDAR Data for Automated Semantic Segmentation of Infrastructure on Multilane Rural Highways

Reviewed: Jul 2024 for Canadian Journal of Civil Engineering

SarAdapter: Prioritizing Attention on Semantic-Aware Representative Tokens for Enhanced Medical Image Segmentation

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Swin2Fill: Image Inpainting algorithm based on SwinV2 Transformer and Fast Fourier Convolution structure

Reviewed: Jun 2024 for International Journal of Pattern Recognition and Artificial Intelligence

Photoelasticity physical neural network for photoelastic stress field recovery

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Depth Prior-Guided 3D Voxel Feature Fusion for 3D Semantic Estimation from Monocular Video

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High Precision Copper Grade Identification Via Vision Transformer with PGNAE Technique

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Attention for semantic segment networks for weed segmentation in lawn

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NCNet: deformable medical image registration network based on neighborhood cross-attention combined with multi-resolution constraints

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Mitosis Detection from Breast Histopathology Images Using a Transformer-Based Network: Mi-DETR

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Dynamic Convolution Neural Networks with both Global and Local Attention for Image Classification

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Chinese Character Recognition based on Swin Transformer-Encoder

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PreCM: The Padding-based Rotation Equivariant Convolution Mode for Semantic Segmentation

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MMNet: Multi-resolution and Multi-scale Attention Network for Underwater Image Enhancement and Super-resolution

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Automatic extraction and 3D modeling of real road scenes using UAV imagery and deep learning semantic segmentation

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Transmission Line Equipment Multi-label Classification Based on Dual-mask Transformer

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An Accurate Detection and Segmentation Model of Traction Substation Equipment for High-Speed Railway Based on Cascade Query Embedding

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ME-Seg&DLS-Net: A dataset and a network for autonomous driving based on multi-element semantic segmentation of pavement

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A hybrid network TEdgeNeXt for data-limited and resource-constrained fault diagnosis

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Incorporating Convolutional and Transformer Architectures to Enhance Semantic Segmentation of Fine-Resolution Urban Images

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Multi-Feature Fusion and Multi-Attention Deep Network for Enhancing Road Extraction in Remote Sensing Images

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Multi-Task Semantic Communication With Graph Attention-Based Feature Correlation Extraction

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Enhancing Satellite View Images using Enhanced Super Resolution GANS

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A forest fire smoke detection model combining convolutional neural network and vision transformer

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Advancing Segmentation of Ultrasound Images Using Customized Finetuning Strategies

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FFEDet:Fine-Grained Feature Enhancement for Small Object Detection

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Triple-Supervised Convolutional Transformer Aggregation for Robust Monocular Endoscopic Dense Depth Estimation

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Forest Fires Smoke Recognition Algorithm Based on 4D-MENet

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Star-Transformer based Semantic Enhanced Union Relationship Extraction

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MCSiT: Multiple CNN-assisted signal transformer for multi-task parameter estimation with sparse MoE

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Interagating Sentinel-2A, Sentinel 1A, and GF-2 imagery to improve the accuracy of forest aboveground biomass estimation in dry-hot valley

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A Smart Machine Learning Method for Effective Discovery of Farm Parcels through High Resolution Satellite Imagery

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EDWNet: A Novel Encoder-Decoder Architecture Network for Water Body Extraction from Optical Images

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Fuzzy Enhanced Feature Extraction for 3D Reconstruction: Applications in Biomedical Imaging with Neural Radiance Fields

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Could Ordinary Satellite Optical Images Detect Landslides by Unsupervised Learning? A Case Study on Rainfall-induced Landslide Clusters

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USTSeg: An Unsupervised U-Shaped Segmentation Model for Industrial Surface Defect Detection Using Swin Transformer Blocks

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Semantic segmentation for multisource remote sensing images incorporating feature slice reconstruction and attention upsampling

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E-UNetFormer for High accuracy Semantic Segmentation of Urban Remote Sensing Images

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RL-USRegi: Fully automated Ultrasound Registration for Radiation-Free Spine Navigation using Reinforcement Learning

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Nested Transformer Decoder using Dense Skip-Connections for Change Detection in High-Resolution Remote Sensing Image

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FAULT-TRANSFORMER: AN AUTOMATIC FAULT DETECTION ALGORITHM ON SEISMIC IMAGES USING A TRANSFORMER ENHANCED NEURAL NETWORK

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Land Cover Classification in High-Resolution Remote Sensing: Using Swin Transformer Deep Learning with Texture Features

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SeRNet: Segmentation helps Reconstruction for Anomaly Detection

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Automated instance segmentation of asphalt pavement patches based on deep learning
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WFormer: A Transformer-based Soft Fusion Model for Robust Image Watermarking
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Unlocking visual attraction: The subtle relationship between image features and attractiveness
Reviewed: Feb 2024 for Mathematics

Recognition of Cardiac Arrhythmia based on Multimodal Data using Extended UNet based Hybrid Bio-inspired Deep Convolution Neural Network
Reviewed: Feb 2024 for Computer Methods in Biomechanics and Biomedical Engineering

InvPT++: Inverted Pyramid Multi-Task Transformer for Visual Scene Understanding
Reviewed: Feb 2024 for IEEE Transactions on Pattern Analysis and Machine Intelligence

MFE-MVSNet: Multi-scale Feature Enhancement Multi-view Stereo With Bi-directional Connections
Reviewed: Feb 2024 for IET Image Processing

Segmentation method of U-net sheet metal engineering drawing based on CBAM attention mechanism
Reviewed: Feb 2024 for Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM

HR_BMNet a boundary perception and multiresolution fusion network for semantic segmentation of remote sensing imagery
Reviewed: Feb 2024 for European Journal of Remote Sensing

Operation Assessment of a Hybrid Distribution Transformer Compensating Voltage and Power Factor Using Predictive Control
Reviewed: Feb 2024 for Mathematics

Vision Transformer-Based Sugarcane Disease Classification: Integrating Hybrid Shifted Windows for Enhanced Precision
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Towards Sustainable Agriculture: A Novel Approach for Rice Leaf Disease Detection Using dCNN and Enhanced Dataset
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Computer vision classification detection of chicken parts based on optimized Swin-Transformer
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Semantic Segmentation of Nighttime Road Scene Based on Unsupervised Domain Adaptation
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Triple-View Knowledge Distillation for Semi-Supervised Semantic Segmentation
2 rounds from Nov 2023 to Feb 2024 for IEEE Transactions on Image Processing

EB-Net: an efficient balanced network for accuracy and speed of remote sensing detection
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Deep learning-based rooftop extraction method for high spatial resolution remote sensing image supported by sample optimization
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A nuclide identification method of γ spectrum and model building based on the Transformer
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A Machine Learning-Based Digital Twin for Anti-Counterfeiting Applications With Copy Detection Patterns
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ADAC: An Active Domain Adaptive Network with Progressive Learning Strategy for Cloud Detection of Remote Sensing Imagery
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A Multifaceted Architecture to Automate Essay Scoring for Assessing English Article Writing: Integrating Semantic, Thematic, and Linguistic Representations
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A shape-aware enhancement Vision Transformer for building extraction from remote sensing imagery
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RTPSegNet: a Region to Patch Top-down Pyramid Framework for Semantic Segmentation of Large-format High-resolution Remote Sensing Images
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Improved SE-UNet network-based semantic segmentation and implied geological significance from geological map
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Evaluating CNN Architecture for Analysing Historical Topographic Hardcopy Maps Analysis: A Study on Training and Validation Accuracy Variation
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An Effective Semantic Segmentation Networks with Multi-Path Attention for Industrial Meter Pointer Images
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The System of Preliminary Road Diagnostics Based on Open Remote Sensing and Climatic Data
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From Segmentation to Classification: A Deep Learning Scheme for Sintered Surface Images Processing

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A Multi-Task Framework for Car Detection from High-Resolution UAV Imagery Focusing on Road Regions

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Enhanced U-Net Algorithm for Typical Crop Classification using GF-6 WFV Remote Sensing Images

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Automatic Radiology Report Generator Using Transformer With Contrast-Based Image Enhancement

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Study on visual localization and evaluation of automatic freshwater fish cutting system based on deep learning framework

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A new global multiplexing structure of original features for road crack detection

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GuidNet: A Method for Laser Stripe Extraction under Reflection Interference

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Unmanned Aerial Vehicle-Based Ice Condition Assessment: Ice Concentration Extraction in Urban River, A Case Study of Harbin Section in Songhua River

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Deep hypersphere architectures to anomaly detection in high-dimensional space

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An Efficient Automated Image Caption Generation by the Encoder Decoder Model

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D-Unet: A symmetric architecture of convolutional neural network with two auxiliary outputs for dementia recognition

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Local-enhanced multi-scale aggregation swin transformer for semantic segmentation of high-resolution remote sensing images

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Crop field extraction from high resolution remote sensing images based on semantic edges and spatial structure map

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Road Detection in High Resolution Aerial Images Using U-Net

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Deep Learning-based Integrated Circuit Surface Defect Detection: Addressing Information Density Imbalance for Industrial Application

Reviewed: Nov 2023 for Applied AI Letters

Vegetation segmentation using oblique photogrammetry point clouds based on RSPT network

Reviewed: Nov 2023 for International Journal of Digital Earth

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- A multiscale feature fusion enhanced CNN with the multiscale channel attention mechanism for efficient landslide detection (MS2LandsNet) using medium-resolution remote sensing data
2 rounds from Sep 2023 to Nov 2023 for International Journal of Digital Earth
-
- Boundary-enhanced dual-stream network for semantic segmentation of high-resolution remote sensing images
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- Satellite image segmentation for landcover mapping using atrous spatial pyramid pooling and a lightweight self-attention mechanism
Reviewed: Nov 2023 for Journal of Spatial Science
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- Multi-stream pyramid collaborative network for spectral unmixing
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- Research on meteorological recognition method based on improved spatio-temporal two-stream network model
Reviewed: Nov 2023 for Plos One
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- SOIF-DN: Preserving Small Object Information Flow with Improved Deep Learning Model
Reviewed: Nov 2023 for IEEE Access
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- Centre-loss - a preferred class verification approach over sample-to-sample in self-checkout products datasets
Reviewed: Nov 2023 for IET Computer Vision
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- UIE-Convformer: Underwater Image Enhancement Based on Convolution and Feature Fusion Transformer
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- BiSS-YOLOX: Steel Surface Defects Detection Using YOLOX Based on Bi-directional Separable Self-attention and Transfer Learning
Reviewed: Nov 2023 for Connection Science
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- Leveraging Bounding Box Annotations for Fish Segmentation in Underwater Images
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- A Pre-trained Data Deduplication Model based on Active Learning
Reviewed: Oct 2023 for IEEE Transactions on Human-Machine Systems
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- Mixture-of-Experts and Semantic-Guided Network for Brain Tumor Segmentation with Missing MRI Modalities
Reviewed: Oct 2023 for IEEE Signal Processing Letters
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- Multimodal Medical Image Fusion Based on Dilated Convolution and Attention-Based Graph Convolutional Networks
Reviewed: Oct 2023 for IEEE Transactions on Circuits and Systems for Video Technology
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- CMPF-UNet: a ConvNeXt multi-scale pyramid fusion U-shaped network for multi-category segmentation of remote sensing images
Reviewed: Oct 2023 for Geocarto International
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- Pine wood nematode disease area identification based on multi-temporal multi-source remote sensing images and BIT model
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Contextual Bands Addition and Multi-Look Inferencing to Improve Semantic Segmentation Model Performance on Satellite Images

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Detection and Monitoring for Enhanced Prevention of Grain Plant Disease Using Classification-Based Deep Ensemble Neural Networks in Smart Agriculture

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Deep Learning-based Standard Sign Language Discrimination

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LoLTV: A Low Light Two-wheeler Violation Dataset with Anomaly Detection Technique

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Semantic Segmentation of Buildings from Multiscale High Spatial Resolution Aerial and Satellite Imagery Using Feature-Guided Deep Learning

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FireViT: An Adaptive Lightweight Backbone Network for Fire Detection

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Multi Self-supervised Pre-fine-tuned Transformer Fusion for Better Intelligent Transportation Detection

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Accurately 3D neuron localization using 2D conv-LSTM super-resolution segmentation network

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A densely connected RL-Unet network for Semantic Segmentation of Synapse multi-organ CT images

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Application of the YOLOv6 Combining CBAM and CloU in Forest Fire and Smoke Detection

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YOLOv7-WFD: A Novel Convolutional Neural Network Model for Helmet Detection in High-Risk Workplaces

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Detecting Anomalies in System Logs With a Compact Convolutional Transformer

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EU-Net: Efficient Dense Skip-Connected Autoencoder for Medical Image Segmentation

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YOLO-Class: Detection and Classification of Aircraft Targets in Satellite Remote Sensing Images Based on YOLO-Extract

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Learning Dynamic Spatial-temporal Dependence in Traffic Forecasting

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FCOSR: A Simple Anchor-Free Rotated Detector for Aerial Object Detection

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Reconstruction-Comparison Deep Learning for Defect Detection in Small-Batch Electronics

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Adaptive Weighted Feature Fusion for Multiscale Atrous Convolution Based 1DCNN with Dilated LSTM-aided Fake News Detection Using Regional Language Text Information

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Complex Natural Resonance-Based Chipless RFID Multi-Tag Detection Using One-Dimensional Convolutional Neural Networks

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High spatial resolution remote sensing image building hierarchy extraction based on superpixels

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Semantic segmentation of remote sensing images combined with attention mechanism and feature enhancement U-Net

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Highly Reliable Robust Mining of Educational Data Features in Universities Based on Dynamic Semantic Memory Networks

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Few-shot segmentation for esophageal OCT images based on self-supervised vision transformer

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Research on Unsupervised Abnormal Sound Detection Based on Auto-encoder Model

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A Robust Lightweight Network for Pedestrian Detection Based on YOLOv5-x

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A Novel Dense Generative Net Based on Satellite Remote Sensing Images for Vehicle Classification

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Yolo-ARIA: Multi-Scale Convolutional Neural Networks for Detecting and Classification Vehicles

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Fast PCB defect detection method based on FasterNet backbone network and CBAM attention mechanism integrated with feature fusion module in improved YOLOv7

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Transformer-based Integrated Framework for Joint Accelerated MRI Reconstruction and Segmentation

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Robust Visual-based Ego-lane Estimation in Urban Environment : Datasets and Algorithms

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CoupleUNet: Swin Transformer coupling CNNs makes strong contextual encoders for VHR image road extraction

2 rounds from Jul 2023 to Aug 2023 for International Journal of Remote Sensing

Decomposing and Coupling Saliency Map for Lesion Segmentation in Ultrasound Images

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Multimodal Deep Learning-based Feature Fusion for Object Detection in Remote Sensing Images

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A NOVEL WATER LEVEL RECOGNITION METHOD IN COMPLEX SCENES

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A Segment-Aware Contrastive Learning Approach to Improved Action Segmentation

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Hybrid Cross-Feature Interaction Attention Module for Object Detection in Intelligent Mobile Scenes

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Geometry-preserving Perceptual Feature Selection for Categorizing LR Aerial Photographs

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CrackTinyNet: A Novel Deep Learning Model Specifically Designed for Superior Performance in Tiny Road Surface Crack Detection

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STransU2Net: Transformer based hybrid model for building segmentation in detailed satellite imagery

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Night construction site detection based on ghost-YOLOX

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Illuminating the darkness: A pyramid-based approach with lightness attention and noise suppression

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Smoke Detection of Marine Engine Room Based on CWC-YOLOv5s Model

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Optimal trained ensemble of classification model for satellite image classification

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IMG2HEIGHT: height estimation from single remote sensing image using a deep convolutional encoder-decoder network

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Deep object segmentation and classification networks for building damage detection using the xBD dataset

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SegHR: A Semantic Segmentation Model Combining Transformer and CNN for High-Resolution Input Remote Sensing Image

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DSH-Net: A Dual-Segmentation Head Perception Network Focusing on Traffic Pavement Information

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MDSNet: A Multiscale Decoupled Supervision Network for Semantic Segmentation of Remote-Sensing Images

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ABANet: Attention boundary-aware network for image segmentation

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Improvement and application of Unet network for avoiding the effect of urban dense high-rise buildings and other feature shadows on water body extraction

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Multi-class segmentation of navel orange surface defects based on improved DeepLabv3+

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Target detection of high-resolution remote sensing images based on convolutional neural network with salient features

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Bidirectional Mutual Guidance Transformer for Salient Object Detection in Optical Remote Sensing Images

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PET: Parameter-efficient Knowledge Distillation on Transformer

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SiamixFormer: a fully-transformer Siamese network with temporal Fusion for accurate building detection and change detection in bi-temporal remote sensing images

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Class-Guidance network based on Pyramid Vision Transformer for efficient Semantic segmentation of high-resolution remote sensing images

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Multimodal fusion semantic segmentation of remote sensing image based on Transformer

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Dcsnn: Pre/post Flooding Classification of Landsat 8 Oli Images of Florida in Usa with Low Time Complexity

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A Dual-Ways Feature Fusion Mechanism Enhancing Active Learning Based on TextCNN

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Medical Aid Diagnosis System Based on Progressive Multilayer Pooling Transformer

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Deep hierarchical transformer for change detection in high-resolution remote sensing images

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MSCNet: Multi-scale Cascaded Network for Semantic Segmentation of High-Resolution Remote Sensing Images

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The Fused Image Harmonisation Method in Integrated Sensing, Communication, and Computation System

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An object detection model for power line inspection using Transformer and convolutional neural networks

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MFDS-GI: Multi-scale Feature Depth-supervised Network using Global Semantic Information for Remote Sensing Change Detection

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Combustion State Identification of Municipal Solid Waste Incineration Process Based on Vision Transformer and Improved Deep Forest Classification

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Parallel matters: Efficient polyp segmentation with parallel structured feature augmentation modules

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Spatial-specific Transformer with involution for semantic segmentation of high-resolution remote sensing images

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Embedding Swin Transformer Block Context Aggregation Network for Remote Sensing Image Semantic Segmentation

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LaneTD: Lane Feature Aggregator Base on Transformer and Dilated Convolution

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An efficient change detection method for disaster-affected buildings based on a lightweight residual block in high-resolution remote sensing images

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GCN-based multi-scale dual fusion for remote sensing building change detection
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BCD-Net: building change detection based on fully scale connected U-Net and subpixel convolution
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PDFormer: Efficient Vision Transformer for Photovoltaic Defects Detection
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Semantic segmentation for remote sensing images based on an AD-HRNet model
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Attention-aware spatio-temporal learning for multi-view gait-based age estimation and gender classification
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RSCDNet: A Robust Deep Learning Architecture for Change Detection From Bi-Temporal High Resolution Remote Sensing Images
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Deeply supervised vestibule segmentation network for CT images with global context-aware pyramid feature extraction
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Small insulator target detection based on multi-feature fusion
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ARE-DRNNST: Adaptive Road Extraction Based on Deep ResNet Model Using Nonlinear Structure Tensors for the Intelligent Transportation Systems
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Ultra-Lightweight Spatial-Spectral Feature Cooperation Network for Change Detection in Remote Sensing Images
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FPGA-oriented lightweight multi-modal free-space detection network
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Object detection method for offshore aquaculture based on improved YOLOv5
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Video frame interpolation via residual blocks and feature pyramid networks

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RAFF-Net: An improved tongue segmentation algorithm based on residual attention network and multiscale feature fusion

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Efficient hand segmentation for rehabilitation tasks using a convolution neural network with attention

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NRTR: Neuron Reconstruction with Transformer from 3D Optical Microscopy Images

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An unsupervised multi-focus image fusion method based on Transformer and U-Net

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Lane detection based on IBN deep neural network and attention

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JSH-Net: joint semantic segmentation and height estimation using deep convolutional networks from single high-resolution remote sensing imagery

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Modified Double U-Net Architecture for Medical Image Segmentation

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Vision Transformer with Convolutional Encoder-Decoder for Hand Gesture Recognition using 24 GHz Doppler Radar

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Edge-enhanced efficient network for remote sensing image super-resolution

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Deep Mutual Learning for Semantic Segmentation with the Fusion Network

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Semantic Segmentation using EfficientNet-based UNet: Improving Class Imbalance Issue in Remote Sensing Images

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Vision Transformer with Reversed Order Residual Blocks and Multi-Layer Perceptron Mixer for Image-based Diagnostic Solution

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Improvement of Medical Image Segmentation Based on Deep Learning Using Multi-Scale Feature Extractor Block

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Construction of index system of children and youth sports environment characteristics assessment based on BiLSTM model

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RBorderNet: Rider Border Collie Optimization-based Deep Convolutional Neural Network for road scene segmentation and road intersection classification

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A Hybrid CNN-Transformer Architecture for Image and Video Parental Control

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Characteristics Based Fire Detection System Under the Effect of Electric Fields With Improved Yolo-v4 and ViBe

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Semi-automatic Road Extraction from High Resolution Satellite Images by Template Matching Using Kullback-Leibler Divergence as a Similarity Measure

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An Attention Encoder-Decoder Network Based on Generative Adversarial Network for Remote Sensing Image Dehazing

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End-to-End Large-Scale Image Retrieval Network with Convolution and Vision Transformers

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A Convolutional Encoder-Decoder for Channel Frequency Response synthetization from Calibrated Echo Response in G.fast

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Multi-scale translation method from SAR to optical remote sensing images

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GCN-Geo: A Graph Convolution Network-based Fine-grained IP Geolocation Framework

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Informal Settlement Extraction from High resolution Remotely Sensed Images using MShMSiMP-DC-CNN Hybrid Framework

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Field road segmentation network based on PraNet

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CloudRaednet: residual attention-based encoder-decoder network for ground-based cloud images segmentation in nychthemeron

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Deep Learning Enabled Road Segmentation and Edge-centerline Extraction from High-resolution Remote Sensing Images

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Vision-Based Power Line Segmentation With an Attention Fusion Network

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Recognizing construction and demolition waste using attention boosted convolutional neural networks

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Automated Road Extraction from Remotely Sensed Imagery using ConnectNet

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A Self-Attentive Hybrid Coding Network for 3D Change Detection in High-Resolution Optical Stereo Images

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Dual Pre-trained Encoder-decoder Architecture with Effective Receptive Fields for Road Segmentation

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Multiscale Recognition of Building Rooftops from High Spatial Resolution Remote Sensing Imagery

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GH-DeeplabV3+: Greenland Climate-High Resolution-DeeplabV3+ for Semantic Segmentation of Road HAO FANG

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Sea ice detection from SSMI data based on improved U-Net convolution neural network

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Detection of plane in remote sensing images using super-resolution

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