Khoi Nguyen

Ph.D. in Computer Science

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🅖 Google Scholar

🏠 http://khoinguyen.org/

Research interests: Scene Understanding: Object Detection, Segmentation, and Reconstruction; Scene Dynamic, Few-shot Learning, Generative and Vision-Language Models

EMPLOYMENT/AWARDS

Jul 2021 – Now

Research Scientist
VinAI Research

Awards
- Best Paper - Honorable Mention Award, WACV 2023
- Outstanding Reviewer Award, ECCV 2020
- Vietnam Education Foundation (VEF) Fellowship (Cohort 2015)

EDUCATION

Sep 2017 – Jun 2021

Doctor of Philosophy in Computer Science
Oregon State University, Corvallis, OR, USA
- Thesis: "Part-based and Uncertainty-Aware Few-shot Object Segmentation in Images"
- Advisor: Prof. Sinisa Todorovic

Sep 2015 – Sep 2017

Master of Science in Computer Science
Oregon State University, Corvallis, OR, USA
- Thesis: "Relational Networks for Visual Relationship Detection",
- Advisor: Prof. Sinisa Todorovic

Sep 2009 – Apr 2014

Bachelors's degree in Computer Science
Bach Khoa University (HCMUT), HCMC, Vietnam
- Thesis: "Entity Disambiguation System based on Wikipedia", advisor: Prof. Tru Cao
- Top-5 student in Computer Science Program (total 330 students),

STUDENT ADVISING

Current VinAI residents
- Vu Tuan Truong, Jul 2022 - now, **Unsupervised Image Segmentation**
- Ngo Duc Tuan, Aug 2021 - now, **3D Object Detection and Segmentation**
- Pham Hai Chau, Aug 2021 - now, **Open-world Object Detection**

Graduated VinAI residents
- Nguyen Van Thanh, Aug 2021 - Feb 2022, **Few-shot Object Counting and Detection**

PUBLICATIONS

Conference papers
- Tuan Ngo, Binh-Son Hua, Khoi Nguyen, **ISBNet: a 3D Point Cloud Instance Segmentation Network with Instance-aware Sampling and Box-aware Dynamic Convolution**, in *Computer Vision and Pattern Recognition (CVPR)*, 2023
- Hue Nguyen, Diep Tran, Khoi Nguyen, Rang Nguyen, **PSENet: Progressive Self-Enhancement Network for Unsupervised Extreme-Light Image Enhancement**, in *Winter Conference on Applications of Computer Vision (WACV)*, 2023, **(The Best Paper - Honorable Mention Award!)**
- Tuan Ngo, Khoi Nguyen, **Geodesic-Former: a Geodesic-Guided Few-shot 3D Point Cloud Instance Segmenter**, in *European Conference on Computer Vision (ECCV)*, 2022
- Thanh Nguyen, Chau Pham, Khoi Nguyen, Minh Hoai, **Few-shot Object Counting and Detection**, in *European Conference on Computer Vision (ECCV)*, 2022
- Khoi D. Nguyen, Quoc-Huy Tran, Khoi Nguyen, Binh-Son Hua, Rang Nguyen, **Inductive and Transductive Few-Shot Video Classification via Appearance and Temporal Alignments**, in *European Conference on Computer Vision (ECCV)*, 2022
- Khoi Nguyen, Sinisa Todorovic, **iFS-RCNN: An Incremental Few-shot Instance Segmenter**, in *Computer Vision and Pattern Recognition (CVPR)*, 2022

- Duong Le, Khoi D. Nguyen, Khoi Nguyen, Quoc-Huy Tran, Rang Nguyen, Binh-Son Hua, **POODLE: Improving Few-shot Learning via Penalizing Out-of-Distribution Samples**, in *Advances in Neural Information Processing Systems (NeurIPS)*, 2021
- Khoi Nguyen, Sinisa Todorovic, **A Weakly Supervised Amodal Segmenter with Boundary Uncertainty Estimation**, in *International Conference on Computer Vision (ICCV)*, 2021
- Khoi Nguyen, Sinisa Todorovic, **FAPIS: A Few-shot Anchor-free Part-based Instance Segmenter**, in *Computer Vision and Pattern Recognition (CVPR)*, 2021
- Khoi Nguyen, Sinisa Todorovic, **A Self-supervised GAN for Unsupervised Few-shot Object Recognition**, in *International Conference on Pattern Recognition (ICPR)*, 2020
- Khoi Nguyen, Sinisa Todorovic, **Feature Weighting and Boosting for Few-Shot Segmentation**, in *International Conference on Computer Vision (ICCV)*, 2019

Patents

- Khoi Nguyen, Maneesh Kumar Singh, **Computer Vision Systems and Methods for Information Extraction from Text Images Using Evidence Grounding Techniques**, in *US Patent*, 2021

PROFESSIONAL ACTIVITIES

Conference Reviewer
- NeurIPS 2022
- ICLR 2022, 2023
- ICCV 2021, 2023
- CVPR 2021, 2022, 2023
- ECCV 2020, 2022

Journal Reviewer TPAMI, TIP

EXPERIENCE

Jun 2019 - Sep 2019   ### Research Intern
AIBee US Corp - Palo Alto, CA, USA
- Multi-person Tracking by Segmentation in Surveillance Camera
- Mentor: Dr. Chunhui Gu, Dr. Sinisa Todorovic, Dr. Silvio Savarese

Jun 2018 - Sep 2018   ### Research Intern
Verisk Analytics - the AI Innovation Lab, Jersey City, New Jersey, USA
- Apply Graph Neural Network to image document analysis for extracting semi-structured information (W2 Form)
- Mentor: Dr. Maneesh Singh