ANH THAI

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EDUCATION

Georgia Institute of Technology August 2019 - Present
Doctor of Philosophy in Computer Science, Minor in Mathematics
Masters of Science in Computer Science, Machine Learning Specialization

- Advised by Prof. James M. Rehg and co-advised by Prof. Judy Hoffman
- Research areas: Computer Vision & Deep Learning

Georgia Institute of Technology August 2015 - May 2019
Bachelor of Science in Computer Science

- Concentration: Intelligence and Information-Internetworks
- Graduated with Highest Hornors - GPA: 3.94/4.0

PUBLICATIONS

3x2: 3D Object Part Segmentation By 2D Semantic Correspondences In Submission
***Anh Thai**, Weiyao Wang, Hao Tang, Stefan Stojanov, James M. Rehg, Matt Feiszli*

ZeroShape: Regression-based Zero-shot Shape Reconstruction In Submission
Zixuan Huang, Stefan Stojanov*, **Anh Thai**, Varun Jampani, James M. Rehg*

Low-shot Object Learning with Mutual Exclusivity Bias NeurIPS 2023
***Anh Thai**, Ahmad Humayun*, Stefan Stojanov*, Zixuan Huang, Bikram Boote, James M. Rehg*

ShapeClipper: Scalable 3D Shape Learning from Single-view Images via Geometric and CLIP-based Consistency CVPR 2022
*Zixuan Huang, Varun Jampani, **Anh Thai**, Yuanzhen Li, Stefan Stojanov, James M. Rehg*

Learning Dense Object Descriptors from Multiple Views for Low-shot Category Generalization NeurIPS 2022
*Stefan Stojanov, **Anh Thai**, Zixuan Huang, James M. Rehg*

The Surprising Positive Knowledge Transfer In Continual 3D Object Shape Reconstruction 3DV 2022
***Anh Thai**, Stefan Stojanov, Zixuan Huang, James M. Rehg*

Planes vs Chairs: Category-guided 3D Shape Learning Without Any 3D Cues ECCV 2022
*Zixuan Huang, Stefan Stojanov, **Anh Thai**, Varun Jampani, James M. Rehg*

3D Reconstruction of Novel Object Shapes from Single Images 3DV 2021
Anh Thai, Stefan Stojanov*, Vijay Upadhya, James M. Rehg*

Using Shape to Categorize: Low-Shot Learning with an Explicit Shape Bias CVPR 2021
*Stefan Stojanov, **Anh Thai**, James M. Rehg*

Incremental Object Learning from Contiguous Views CVPR 2019
Stefan Stojanov, Samarth Mishra, **Anh Thai***, Nikhil Dhanda, Ahmad Humayun, Chen Yu, Linda B. Smith, James M. Rehg*

WORK EXPERIENCE

Meta AI (FAIR) May 2023 - December 2023
Research Intern/Part-time Student Researcher *Menlo Park, CA*

- Investigated 3D object part segmentation by leveraging 2D semantic correspondences emerged from diffusion features
- Used PyTorch, OpenCV, Blender, PyTorch3D, Trimesh

Meta Reality Labs Research May 2021 - August 2021
Research Intern *Redmond, WA - Remote*

- Investigated incremental learning of object 3D representations from few RGB images using 3D priors
- Used PyTorch, OpenCV and NumPy

Google May 2018 - August 2018
Software Engineering Intern *Mountain View, CA*

- Improved human label quality and implemented the end-to-end training pipeline for large-scale YouTube video classification task
- Used SQL, C++, Python, TensorFlow, and Colab

Google May 2017 - August 2017
Software Engineering Intern *Venice Beach, CA*

- Implemented the client code of the in-app notification screen of Google Ads app in Flutter framework
- Used Dart and Flutter framework

ACADEMIA RESEARCH EXPERIENCE

Graduate Research Assistant August 2019 - Present

Current research generally focuses on computer vision problems inspired by developmental psychology:

- Investigating the properties of self-supervised visual representation learning under scenarios that closely resemble infant learning
- Understanding the relationship between 3D object shapes and categorization in few-shot and continual learning settings
- Exploring 3D object-centric representation learning in scene context

Undergraduate Research Assistant August 2017 - May 2019

- Advised by Dr. James M. Rehg
- Published "Incremental Object Learning from Contiguous Views" (CVPR 2019 - Oral, best finalist) as joint second author
- Investigated domain shift in transfer learning from synthetic to real-world data and the robustness of self-supervised object 3D representation learning

POSTERS

Instance to Category Generalization: A Self-supervised Model Inspired by Infant Learning
International Congress of Infant Studies - ICIS 2022
*Stefan Stojanov, **Anh Thai**, Zixuan Huang, James M. Rehg*

The Success of Continual Machine Learning in An Infant-inspired Setting
International Congress of Infant Studies - ICIS 2020
*Stefan Stojanov, **Anh Thai**, Samarth Mishra, Nikhil Dhanda, Ahmad Humayun, Chen Yu, Linda B. Smith, James M. Rehg*

SKILLS

Programing Languages: Python, Java, MATLAB

Tools: Blender, Trimesh, OpenCV, PyTorch, NumPy, PyTorch3D

Languages: English (full-proficiency), Vietnamese (native)

PROFESSIONAL ACTIVITIES

Dagstuhl Seminar - Developmental Machine Learning: From Human Learning to Machines and Back October 16 - 22, 2022
Saarland, Germany

Volunteered for seminar organization:
- Organized seminar activities: group discussions, tutorials, talks, and social activities
- Communicated closely with participants, organizers, and hosts
- Collected notes, presentations, and reports for publication

Conference Reviewing

- Reviewed for CVPR, WACV, BMVC, NeurIPS, ICCV

Teaching Assistant

- Machine Learning with Limited Supervision (CS 7647 - Fall 2023)
- Behavioral Imaging (CS 7626 - Spring 2022)
- Objects and Design (CS 2340 - Spring 2017)
- Introduction to Linear Algebra (MATH 1553 - Fall 2016)

Invited Talks

- **Low-shot Object Learning with Mutual Exclusivity Bias** - *Stanford University, Language & Cognition Lab* - April 2023
- **Does Continual Learning = Catastrophic Forgetting?** - *ContinualAI Reading Group* - February 2021
- **Developmental Machine Learning** - *VinAI Research Seminar Series* - November 2020

AWARDS

Bronze Medal in World CodeSprint 4 June 2016
HackerRank

- Competed against 5236 participants around the world

Faculty Honors 2015 - 2019
Georgia Institute of Technology

- Achieved 4.0 GPA

Second Prize in Vietnam National Mathematical Olympiad (VMO 2014) January 2014
Vietnam Ministry of Education and Training

Best Paper Finalist June 2019
Computer Vision and Pattern Recognition Conference (CVPR) 2019