

Gregory Meyer

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EDUCATION

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

PHD, ELECTRICAL AND COMPUTER
ENGINEERING

August 2014 - December 2016

MS, ELECTRICAL AND COMPUTER
ENGINEERING

August 2011 - May 2014

BS, COMPUTER ENGINEERING

January 2008 - December 2010

RESEARCH AREAS

- Computer Vision • Machine Learning
- Self-Driving • Foundational Models

SKILLS

- Python • C++ • C • CUDA
- PyTorch • TensorFlow • OpenCV

AWARDS

- IEEE Robotics and Automation Letters
Best Paper Award, 2021

ACADEMIC SERVICES

PEER REVIEW

- CVPR • ICCV • ECCV • BMVC
- IJCV • RA-L • ICRA • IROS
- T-RO • T-ITS • Neurocomputing
- Sensors

SELECTED PUBLICATIONS

- Z. Zhang, G. P. Meyer, Z. Lu, A. Shrivastava, A. Ravichandran, E. M. Wolff, "VLM-KD: Knowledge Distillation from VLM for Long-Tail Visual Recognition," Arxiv, 2024.
- M. Ye, G. P. Meyer, Z. Zhang, D. Park, S. K. Mustikovela, Y. Chai, E. M. Wolff, "VLMine: Long-Tail Data Mining with Vision Language Models," Arxiv, 2024.
- Y. Xie, H. Chen, G. P. Meyer, Y. J. Lee, E. M. Wolff, M. Tomizuka, W. Zhan, Y. Chai, X. Huang, "Cohere3D: Exploiting Temporal Coherence for Unsupervised Representation Learning of Vision-based Autonomous Driving," Arxiv, 2024.
- M. Cai, H. Liu, S. K. Mustikovela, G. P. Meyer, Y. Chai, D. Park, Y. J. Lee, "Making Large Multimodal Models Understand Arbitrary Visual Prompts," in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024.
- H. Chen, Z. Chen, G. P. Meyer, D. Park, C. Vondrick, A. Shrivastava, Y. Chai, "SHIFT3D: Synthesizing Hard Inputs For Tricking 3D Detectors," in Proceedings of the International Conference on Computer Vision (ICCV), 2023.
- M. Ye, G. P. Meyer, Y. Chai, Q. Liu, "Efficient Transformer-based 3D Object Detection with Dynamic Token Halting," in Proceedings of the International Conference on Computer Vision (ICCV), 2023.
- N. Djuric, H. Cui, Z. Su, S. Wu, H. Wang, F.-C. Chou, L. San Martin, S. Feng, R. Hu, Y. Xu, A. Dayan, S. Zhang, B. C. Becker, G. P. Meyer, C. Vallespi-Gonzalez, C. K. Wellington, "MultiXNet: Multiclass Multistage Multimodal Motion Prediction," in Proceedings of the IEEE Intelligent Vehicles Symposium (IV), 2021.
- G. P. Meyer, "An Alternative Probabilistic Interpretation of the Huber Loss," in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021.
- G. P. Meyer, J. Charland, S. Pandey, A. Laddha, C. Vallespi-Gonzalez, and C. K. Wellington, "LaserFlow: Efficient and Probabilistic Object Detection and Motion Forecasting," IEEE Robotics and Automation Letters (RA-L), 2020.
- G.P. Meyer, J. Charland, D. Hegde, A. Laddha, C. Vallespi-Gonzalez, "Sensor Fusion for Joint 3D Object Detection and Semantic Segmentation," in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), 2019.
- G. P. Meyer, A. Laddha, E. Kee, C. Vallespi-Gonzalez, and C. K. Wellington, "LaserNet: An Efficient Probabilistic 3D Object Detector for Autonomous Driving," in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019.
- G. P. Meyer, S. Gupta, I. Frosio, D. Reddy, and J. Kautz, "Robust Model-based 3D Head Pose Estimation," in Proceedings of the International Conference on Computer Vision (ICCV), 2015.

RECENT EXPERIENCE

CRUISE | STAFF RESEARCH SCIENTIST, TEAM LEAD

September 2021 - Present | Pittsburgh, PA

- Lead a team of researchers exploring a variety of perception-related topics for autonomous driving, including efficient architectures, sensor fusion, model generalization, data mining, foundation models, and vision-language models.

MOTIONAL | PRINCIPAL RESEARCH SCIENTIST

February 2021 - September 2021 | Pittsburgh, PA

- Explored methods for long-tail data mining using Bayesian deep learning.
- Advised the development of long-range 3D object detectors.

UBER ATG | SENIOR SOFTWARE ENGINEER, TEAM LEAD

January 2017 - February 2021 | Pittsburgh, PA

- Led the research into methods for real-time 3D object detection and motion forecasting utilizing LiDARs and cameras for self-driving vehicles. Supported the productionization of these methods onto our autonomous platform.

GOOGLE | SOFTWARE ENGINEERING INTERN

May 2015 - August 2015 | Seattle, WA

- Developed a technique for capturing a room-sized environment with the multi-aperture Jump camera for virtual reality.

May 2014 - August 2014 | Mountain View, CA

- Explored techniques for editing photos captured by the Project Tango phone.

May 2013 - August 2013 | Mountain View, CA

- Helped build a system for capturing a coarse 3D model of an object using a low-cost RGB-D camera.

NVIDIA | RESEARCH INTERN

August 2014 - January 2015 | Sunnyvale, CA

- Developed a method for head pose estimation using a low-cost RGB-D camera.