

Daeyun Shin

Curriculum Vitae

Ph.D. Candidate
Department of Computer Science
University of California, Irvine
E-mail: daeyuns@uci.edu
URL: <http://research.dshin.org/>

4209 Donald Bren Hall
Irvine, CA 92617
+1 (207) 200-7446

Research Interests

My research interests are in artificial intelligence at the intersection of computer vision and graphics. I am interested in 3D scene understanding and representation learning. I am advised by Prof. Charles Fowlkes.

Education

Sept 2017 – present	Ph.D. in Computer Science, University of California, Irvine
Aug 2015 – Jul 2017	M.S. in Computer Science, University of Illinois at Urbana-Champaign
Aug 2011 – May 2015	B.S. in Computer Science, University of Illinois at Urbana-Champaign

Publications

- [1] Y. Zhao, S. Kong, D. Shin, and C. Fowlkes, “Domain decluttering: Simplifying images to mitigate synthetic-real domain shift and improve depth estimation,” in *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- [2] D. Shin, Z. Ren, E. B. Sudderth, and C. C. Fowlkes, “3d scene reconstruction with multi-layer depth and epipolar transformers,” in *IEEE International Conference on Computer Vision (ICCV)*, 2019.
- [3] D. Shin, C. Fowlkes, and D. Hoiem, “Pixels, voxels, and views: A study of shape representations for single view 3d object shape prediction,” in *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
- [4] J. Rock, T. Gupta, J. Thorsen, J. Gwak, D. Shin, and D. Hoiem, “Completing 3D object shape from one depth image,” in *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015.

Manuscripts

- [1] Z. Wang, L. Chen, S. Rathore, D. Shin, and C. Fowlkes, “Geometric pose affordance: 3d human pose with scene constraints,” *arXiv:1905.07718*, 2019.
- [2] T. Gupta, D. Shin, N. Sivagnanadasan, and D. Hoiem, “3dfs: Deformable dense depth fusion and segmentation for object reconstruction from a handheld camera,” *arXiv:1606.05002*, 2016.

Internship

June 2019 – Sept 2019	Snap Inc. , Research Intern Santa Monica, CA – 3D vision research project.
May 2016 – Aug 2016	Google Inc. , Software Engineering Intern New York, NY – Worked on a graphics/vision project registering handwritten strokes to images for an unreleased product.
May 2015 – Aug 2015	Google Inc. , Software Engineering Intern Pittsburgh, PA – Display/Video Ads team.
May 2014 – Aug 2014	Amazon Web Services , Software Engineering Intern Palo Alto, CA – Software development with WorkDocs team.
May 2013 – Aug 2013	Amazon.com , Software Engineering Intern Seattle, WA – Worked on face detection for video-based surveillance software in a computer vision team.

Academic Employment

Since Mar 2018	Research Assistant , CS Department Irvine, CA – 3D vision research with Prof. Charless Fowlkes.
Sept 2017 – Mar 2018	Teaching Assistant , CS Department Irvine, CA – Design and Analysis of Algorithms (CS 161), Computational Photography (CS 116)
Aug 2016 – Jul 2017	Research Assistant , CS Department Urbana, IL – 3D vision research with Prof. Derek Hoiem.
Aug 2015 – May 2016	Teaching Assistant , CS Department Urbana, IL – Computational Photography (CS 445), Applied Machine Learning (CS 498 DF)
Aug 2013 – May 2014	Course Assistant , Undergraduate, CS Department Urbana, IL – CS 242 (Programming Studio), CS 473 (Fundamental Algorithms, Grader), CS 241 (System Programming), ENG 100 (Engineering Orientation).

Workshop Presentations

Jun 2019	3D Scene Understanding for Vision, Graphics, and Robotics: Multi-layer and Virtual-view 3D Scene Reconstruction from a Single Image
Jun 2019	The 2019 SUMO Challenge Workshop at CVPR: Multi-layer depth and epipolar feature transformers for 3d scene reconstruction
Jun 2018	Vision Meets Cognition Workshop at CVPR: Pixels, voxels, and views: A study of shape representations for single view 3D object shape prediction

Talks

Oct 2019	Scalable Graphics, Vision, & Robotics (SGVR) Lab, 3D Scene Reconstruction with Multi-layer Depth and Epipolar Transformers. KAIST, Daejeon, Korea.
Sept 2019	Berkeley Artificial Intelligence Research (BAIR) Lab, 3D Scene Reconstruction with Multi-layer Depth and Epipolar Transformers. CA, USA.
Sept 2019	Stanford Vision and Learning Lab (SVL) Group Meeting, 3D Scene Reconstruction with Multi-layer Depth and Epipolar Transformers. CA, USA.
Apr 2019	UCI AI/ML Seminar Series, Multi-layer Depth and Epipolar Feature Transformers for 3D Scene Reconstruction. CA, USA.

Professional Services

Since 2018	Conference Reviewer , ECCV 2020, CVPR 2020, ICLR 2020, AAAI 2020, ICCV 2019, CVPR 2019, WACV 2020, BMVC 2019, ACCV 2018, WACV 2019 Journal Reviewer , T-PAMI, IEEE Access
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Activities

Aug 2013	ACM-ICPC , Represented UIUC in Mid-Central USA
Jun 2012 – Jul 2012	Lu Lab , Research application development in C++, http://lulab.bioen.illinois.edu/
May 2012 – Aug 2012	Institute for Genomic Biology , Urbana, IL, Employed part-time to develop agricultural database migration and visualization software.