

EDUCATION	<div>University of Michigan, Ann Arbor, USA</div> <div>Sept. 2019 - April 2024 (Expected)</div> <div>Ph.D. in Computer Science, EECS</div> <div>• Advisors: Prof. David Fouhey, Prof. Justin Johnson</div> <div>Carnegie Mellon University, Pittsburgh, USA</div> <div>Aug. 2017 - Aug. 2019</div> <div>Masters in Robotics, Robotics Institute, School of Computer Science</div> <div>• CGPA: 4.05/4.0</div> <div>• Advisor: Prof. Abhinav Gupta</div> <div>Indian Institute of Technology Bombay, Mumbai, India</div> <div>Jul. 2011 - Jul. 2015</div> <div>Bachelor of Technology (B.Tech), Computer Science and Engineering with Honours</div> <div>• CGPA: 8.77/10</div> <div>• Minor in Electrical Engineering</div> <div>• Advisor: Prof. Suyash Awate, Prof. Ganesh Ramakrishnan</div>
INTERESTS	<div>My research interests are to understand and learn the 3D structure and human-object interactions in the visual world with minimal supervision from images, and raw data. Topics: <i>Computer Vision, Machine Learning, Web-scale learning</i></div>
PROFESSIONAL EXPERIENCE	<div>Waymo Research, Mountain View, CA</div> <div>Jun. 2023 - Aug 2023</div> <div>Research Intern, Preception Research</div> <div>Xinchen Yan and Charles Qi</div> <div>Google Research, Mountain View, CA</div> <div>May. 2022 - Dec 2022</div> <div>Research Intern, Scene Understanding Team</div> <div>Prof. Leonidas Guibas</div> <div>Samsung Research, Seoul, South Korea</div> <div>Sept. 2015 - Jun. 2017</div> <div>Research Engineer, AI Lab</div> <div>Prof. Jihie Kim</div> <div>Samsung Research, Seoul, South Korea</div> <div>May 2014 - Jul. 2014</div> <div>Research Intern, AI Lab</div> <div>Choonoh Lee</div> <div>Technical University of Braunschweig, Branunschweig, Germany</div> <div>May 2013 - Jul. 2013</div> <div>Research Intern, Algorithms Group</div> <div>Prof. Sándor P. Fekete</div>
PUBLICATIONS	<div>NIFTY: Neural Object Interaction Fields for Guided Human Motion Synthesis</div> <div>Nilesh Kulkarni, Davis Rempe, Kyle Genova, Abhijit Kundu, Justin Johnson, David F. Fouhey, Leonidas Guibas</div> <div>Arxiv, 2023</div> <div>Learning to Predict Scene-Level Implicit 3D from Posed RGBD Data</div> <div>Nilesh Kulkarni, Linyi Jin, Justin Johnson, David F. Fouhey</div> <div>CVPR, 2023</div> <div>What’s Behind the Couch? Directed Ray Distance Functions (DRDF) for 3D Scene Reconstruction</div> <div>Nilesh Kulkarni, Justin Johnson, David F. Fouhey</div> <div>ECCV, 2022</div> <div>Collision Replay: What does bumping into things tell you about the scene geometry?</div> <div>Alexander Raistrick, Nilesh Kulkarni, David F. Fouhey</div> <div>BMVC, 2021 (Oral)</div> <div>Implicit mesh reconstruction from unannotated image collections</div> <div>Shubham Tulsiani, Nilesh Kulkarni, Abhinav Gupta</div> <div>Preprint, 2021</div> <div>Articulation-Aware Canonical Surface Mapping</div> <div>Nilesh Kulkarni, Abhinav Gupta, David F. Fouhey, Shubham Tulsiani</div> <div>CVPR, 2020</div> <div>Canonical Surface Mapping via Geometric Cycle Consistency</div> <div>Nilesh Kulkarni, Abhinav Gupta*, Shubham Tulsiani*</div> <div>ICCV, 2019</div> <div>3D-RelNet: Joint Object and Relational Network for 3D Prediction</div>

Nilesh Kulkarni, Ishan Misra, Shubham Tulsiani, Abhinav Gupta
ICCV, 2019

On-Device Neural Language Model based Word Prediction

Seunghak Yu*, Nilesh Kulkarni*, Haejun Lee, Jihie Kim

27th International Conference on Computational Linguistics: System Demonstrations (COLING 2018)

Syllable-level Neural Language Model for Agglutinative Language

Seunghak Yu*, Nilesh Kulkarni*, Haejun Lee, Jihie Kim

Empirical Methods in Natural Language Processing, Workshop on Subword and Character Level Models, (EMNLP 2017)

Robust Kernel Principal Nested Spheres

Suyash Awate*, Manik Dhar*, Nilesh Kulkarni*

23rd International Conference on Pattern Recognition (ICPR 2016)

Research and Development of Matsya 4.0, Autonomous Underwater Vehicle

Technical Report, International Robosub Competition, 2015

* – Shared Authorship

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| ACHIEVEMENTS | <ul style="list-style-type: none">• Secured an All India Rank 77 in IITJEE-2011 (amongst 0.5 million students)• Certified as among the Top 1% in India, in the Indian National Chemistry Olympiad and Indian National Physics Olympiad, 2011• Awarded Institute Technical Color (7 among 9000), 2014• Awarded Institute Technical Special Mention (15 among 9000), 2013• Awarded the Tata Welfare Trust Scholarship for Graduate Studies, 2017 |
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| PROFESSIONAL
SERVICE | <u>Reviewer</u> <ul style="list-style-type: none">• CVPR 2020, 2021, 2022, 2023• ECCV/ICCV 2019, 2020, 2022• NeurIPS 2020, 2021• 3DV 2019, 2022 <u>Teaching</u> <ul style="list-style-type: none">• AI4ALL 2021 |
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| TEACHING
&
MENTORING | <ul style="list-style-type: none">• Teaching Assistant CS 210 Logic Design, IIT Bombay• Teaching Assistant Workshop on Parallel Programming conducted by NVIDIA at IIT Bombay• Technical Mentor mentored 4 teams on technical projects• Department Academic Mentor mentored 9 sophomores• Electronics Club Coordinator club catering to hobby electronics at IIT Bombay |
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| SALIENT
COURSES | <ul style="list-style-type: none">• CMU: Introduction to Machine Learning (10701), Visual Learning and Recognition (16824), Computer Vision (16720), Math Fundamentals for Robotics (16811)• IITB: Topics in Machine Learning, Digital Image processing, Artificial Intelligence, Algorithms, Signal processing, Medical Image Processing |
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