

Aditya Ganeshan

GRADUATE STUDENT, BROWN UNIVERSITY

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Webpage : <https://bardofcodes.github.io>
Github : <https://github.com/BardOfCodes>

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| EDUCATION | Brown University, US <i>Doctor of Philosophy, Computer Science</i> | August 2021 - present |
| | Indian Institute of Technology, Roorkee, India <i>Integrated Master of Science, Applied Mathematics</i> Thesis: <i>Per-pixel feedback for improving semantic segmentation</i> | August 2012 - July 2017 |

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| PROFESSIONAL EXPERIENCE | Research Assistant <i>Brown Visual Computing Lab, Brown University</i> | August 2021 - present |
| | Mentor: Daniel Ritchie | |
| | Research Scientist Intern <i>Adobe, San Francisco</i> | June 2025 - September 2025 |
| | Mentor/Manager: Thibault Groueix | |
| | Visiting Associate Researcher <i>Igarashi Lab, University of Tokyo, Tokyo</i> | December 2024 - February 2025 |
| | Mentors: Maria Larsson & Takeo Igarashi | |
| | Research Scientist Intern <i>Adobe, San Francisco</i> | June 2024 - September 2024 |
| | Mentor/Manager: Matthew Fisher | |
| | Researcher <i>Preferred Networks Inc., Tokyo, Japan</i> | December 2018 - May 2021 |
| | Manager: Shin-Ichi Maeda | |
| | Research Assistant <i>Video Analytics Lab, Indian Institute of Science</i> | 2017 - November 2018 |
| | Mentor/Manager: R V Babu | |

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| SCHOLARSHIPS & AWARDS & HONORS | <i>Outstanding Reviewer (top 8%), NeurIPS 2022</i> | June 2022 |
| | <i>Highlighted Reviewer (top 8%), ICLR 2022</i> | April 2022 |
| | <i>Winner, Deep Perception Hackathon, Machine Learning Tokyo, Japan</i> | September 2019 |
| | <i>Winner, AutoNUE: Scene Understanding Challenge, ECCV, Germany</i> | September 2018 |
| | <i>INSPIRE Scholarship, Indian Institute of Technology, Roorkee, India</i> | 2012 - 2017 |

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| CONFERENCE PUBLICATIONS | <i>Pattern Analogies: Learning to Perform Programmatic Image Edits by Analogy, CVPR'25,</i> A Ganeshan , T Groueix, P Guerrero, R M ech, M Fisher, D Ritchie. | |
| | <i>Learning to Edit Visual Programs with Self-Supervision, NeurIPS'24,</i> R K Jones, R Zhang, A Ganeshan , D Ritchie. | |
| | <i>Improving Unsupervised Visual Program Inference with Code Rewriting Families,</i> ICCV'23 (Oral - 1.8%), A Ganeshan , R K Jones, D Ritchie. | |
| | <i>Skill Generalization with Verbs, IROS'23,</i> R Ma, L Lam, B A Spiegel, A Ganeshan , B Abbatematteo, R Patel, D Paulius, S Tellex, G Konidaris. | |

Improving Semantic Segmentation via Cycle-consistent Video Auto-labelling, ICCV'21,
A Ganeshan, A Vallet, Y Kudo, S I. Maeda, T Kerola, R Ambruş, D Park, A Gaidon.

Phonetroller: Visual Representations of Fingers for Precise Touch Input when using a Phone in VR, CHI'21,
F Matulic, A Ganeshan, H Fujiwara, D Vogel.

Meta-learning Extractors for Music Source Separation, ICASSP'20,
D Samuel, A Ganeshan, J Naradowsky.

FDA: Feature Disruptive Attack, ICCV'19,
A Ganeshan, B S Vivek, R V Babu.

iSPA-Net: Iterative Semantic Pose Alignment Network, ACMMM'18,
J N Kundu*, A Ganeshan*, R M Venkatesh*, A Prakash, R V Babu.

JOURNAL
ARTICLE

ParSEL: Parameterized Shape Editing with Language, SIGGRAPH Asia 2024,
A Ganeshan, R Y Huang, X Xu, R K Jones, D Ritchie.

Generalizable data-free objective for crafting universal adversarial perturbations, TPAMI'18,
M K Reddy*, A Ganeshan*, R V Babu.

WORKSHOP
PAPERS

Object Pose Estimation from Monocular Image using Multi-View Keypoint Correspondence, (ECCV '18) "Geometry Meets Deep Learning" Workshop 2018,
J N Kundu*, R M Venkatesh*, A Ganeshan*, R V Babu.

PRE-PRINTS

Creating Language-driven Spatial Variations of Icon Images, Arxiv 2024,
X Xu, A Ganeshan, K D D Willis, Y Pu, D Ritchie.

Open-Universe Indoor Scene Generation using LLM Program Synthesis and Uncurated Object Databases, Arxiv 2024,
R Aguina-Kang, M Gumin, D H Han, S Morris, S J Yoo, A Ganeshan, R K Jones, Q A. Wei, K Fu, D Ritchie.

DISSERTATION

Per-Pixel Feedback for improving Semantic Segmentation.
Master's Dissertation, Indian Institute of Technology, Roorkee, 2017.
A Ganeshan.

TEACHING
EXPERIENCE

CSCI 2240: Advanced Computer Graphics, Brown University, Providence Spring 2023
Graduate Teaching Assistant with Professor Daniel Ritchie.

DS-265: Deep Learning for Computer Vision, IISc, India Spring 2018
Teaching Assistant with Professor R V Babu.

REVIEWING

CVPR 2025, SIGGRAPH 2025, CG Forum, EuroGraphics 2024-2025
CVPR 2024, ECCV 2024, SIGGRAPH 2024, SIGGRAPH Asia 2024 2023-2024
IROS 2023, CVPR 2023, ICCV 2023, NeurIPS 2023, 2022-2023
ICCV 2021, ICML 2021, ICLR 2022, CVPR 2022, NeurIPS 2022, 2021-2022
AAAI 2020, NeurIPS 2020, ECCV 2020, CVPR 2021 2019-2020

* equal contribution

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| SERVICE | Volunteer | |
| | <i>SIGGRAPH 2023, LA, US</i> | August 2023 |
| | Student Mentor | |
| | <i>ExploreCSR, Brown University, US</i> | Feb 2023 - May 2023 |
| | Study Group Leader (REU Site) | |
| | <i>AI for computational creativity, Brown University, US</i> | June 2022 - July 2022 |
| | Head Volunteer | |
| <i>RLDM 2022, Brown University, US</i> | June 2022 | |
| Member of Global Internship Committee | | |
| <i>Preferred Networks Inc, Japan</i> | May 2019 - November 2020 | |
| General Secretary, | | |
| <i>Music Section, IIT Roorkee, India</i> | May 2015 - May 2016 | |

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| OTHER PROJECTS | GeoLIPI | |
| | <i>A DSL for 2D/3D Implicit Geometric Modelling in python.</i> | Spring 2024 |
| | Pack Poly | |
| | <i>Packing polyominoes with SMT solvers and analysing their stability.</i> | Spring 2023 |
| | Neural Volumetric Primitives | |
| | <i>Compressing a dataset of 3D shapes with a codebook + neural networks.</i> | Autumn 2022 |
| | Branching BAD | |
| | <i>Branching many world Bootstrapped Abstraction Discovery from scratch.</i> | spring 2023 |
| | A Special Place in Hell | |
| | <i>A casual projectile-shooting game with a morbid sense of humour.</i> | May 2018 |
| | DRL in CV | |
| | <i>A course on using Deep RL in computer vision.</i> | 2017-2018 |
| Flying Furniture Dataset | | |
| <i>Code for creating the Flying Furniture dataset.</i> | spring 2018 | |
| Defense against the dark arts | | |
| <i>Evaluation of defense mechanisms against UAP generation algorithms.</i> | May 2018 | |