Ankit Goyal

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Education

2018-2022 (Expected)	**Ph.D. in Computer Science**, *Princeton University*. Advisor: Jia Deng
2016-18	**M.S. in Computer Science and Engineering**, *University of Michigan*. GPA: 3.97/4.0, Track: Artificial Intelligence A+ (outstanding grade above A) in 2/6 courses
2012-16	**B.Tech. in Electrical Engineering**, *Indian Institute of Technology (IIT) Kanpur*. CPI: 9.8/10.0, Minor: Computer Science Rank 2/150 students | A* (outstanding grade above A) in 10/45 courses

Research Experience

June'21 - Present	**Research Intern**, *NVIDIA Robotics Research Lab*. Mentor: Dieter Fox Built state-of-the-art object manipulation system and executed it on real robots.
Dec'20 - May'21	**Research Intern**, *Intel Intelligent Systems Lab*. Mentor: Vladlen Koltun Conceptualized non-deep neural networks for extremely fast image recognition and object detection.
Sep'18 - Present	**Graduate Student Research Assistant**, *Princeton University*. Mentor: Jia Deng Conceptualized and built ML systems for 3D perception, reasoning and interaction.
Sep'16 - Aug'18	**Graduate Student Research Assistant**, *University of Michigan*. Mentor: Jia Deng Developed natural language processing models with spatial reasoning capabilities.
May'16 - July'16	**Research Intern**, *Microsoft Research (MSR)*. Mentor: Prateek Jain Built ML models that could fit on IoT devices with only 2kB memory.
May'15 - July'15	**Research Intern**, *University of Southern California (USC)*. Mentor: Shrikanth S. Narayanan Developed multimodal ML models for emotion prediction in movies.
May'14 - April'15	**Research Assistant**, *IIT Kanpur*. Mentor: Nischal Verma Developed computer vision based systems for autonomous inventory management in warehouse.

Awards / Recognition

2021	**Qualcomm Innovation Fellowship**. $100K Research Grant for 1 year.
2021	**Outstanding Reviewer**, *ICCV*. Top 5% of all reviewers at tier-1 computer vision conference
2016	**Sridhar Memorial Prize**, *IIT Kanpur*. Awarded to the best student in the Department of Electrical Engineering.
2015	**Viterbi-India Scholarship**, *USC and Indo-US Science and Technology Forum (IUSSTF)*. Selected for the prestigious Viterbi-India Program to conduct research in USC.
2013-2015	**Academic Excellence Award**, *IIT Kanpur*. Awarded for 3 consecutive years for distinctive academic performance.

Publications

2021   **Non-Deep Networks**.
A Goyal, A Bochkovskiy, J Deng, V Koltun
International Conference on Learning Representations (ICLR) In Submission

2021   **Revisiting Point Cloud Classification with a Simple and Effective Baseline**.
A Goyal, H Law, B Liu, A Newell, J Deng
International Conference on Machine Learning (ICML)

2020   **Rel3D: A Minimally Contrastive Benchmark for Grounding Spatial Relations in 3D**.
A Goyal, K Yang, D Yang, J Deng
Neural Information Processing Systems (NeurIPS), Spotlight (Top 4% of submitted papers)

2020   **PackIt: A Virtual Environment for Geometric Planning**.
A Goyal, J Deng
International Conference in Machine Learning (ICML)

2019   **Semantic Relation Detection Between Construction Entities To Support Safe Human-Robot Collaboration in Construction**.
D Kim, **A Goyal**, A Newell, S Lee, J Deng, V Kamat
ASCE International Conference on Computing in Civil Engineering (i3CE)

2018   **Think Visually: Question Answering through Virtual Imagery**.
A Goyal, J Wang, J Deng
Annual Meeting of the Association of Computational Linguistics (ACL)

2017   **ProtoNN: Compressed and Accurate kNN for Resource-scarce Devices**.
C Gupta, AS Suggala, **A Goyal**, HV Simhadri, B Paranjape, A Kumar, S Goyal, R Udupa, M Varma, P Jain
International Conference in Machine Learning (ICML)

2016   **A Multimodal Mixture-of-Experts Model for Dynamic Emotion Prediction in Movies**.
A Goyal, N Kumar, T Guha, SS Narayanan
IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)

2015   **Object Matching using Speeded Up Robust Features**.
NK Verma, **A Goyal**, AH Vardhan, RK Sevakula, A Salour
Asia Pacific Symposium on Intelligent and Evolutionary Systems (IES)

2015   **Template Matching for Inventory Management using Fuzzy Histogram and Spatial Filters**.
NK Verma, **A Goyal**, A Chaman, RK Sevakula and A Salour
IEEE Conference on Industrial Electronics and Applications (ICIEA)

Teaching Experience

Fall 2019   **COS529 Advanced Computer Vision**, *Princeton University*.
Graduate Student Instructor

Fall 2018   **COS429 Computer Vision**, *Princeton University*.
Head Teaching Assistant

Fall 2017   **EECS442 Computer Vision**, *University of Michigan*.
Winter 2018   Graduate Student Instructor

Service

2020-22   **Reviewer**.
○ **2021**: ICLR, CVPR, ICCV, ICML, NeurIPS
○ **2020**: ICLR, CVPR, ECCV, TPAMI

2013-15   **Counselling Service**, *IIT Kanpur*.
○ **Assistant Coordinator**: Responsible for managing sensitive situations in the undergraduate community and organizing week-long orientation for over 800 freshers
○ **Academic Mentor**: Mentored students struggling academically.
○ **Student Guide**: Ensured smooth induction of 6 freshmen into the college environment.