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| EMPLOYMENT | **Facebook AI Research** Oct 2016 – present, New York, NY  *Staff Research Engineer Feb 2021 – present*  *Senior Research Engineer June 2018 – Feb 2021*  *Research Engineer Oct 2016 – June 2018*   * Tech Lead of team focused on computer vision and responsible AI research and engineering. * Extensive research experience in computer vision and deep learning – 16K plus citations, won best paper award at ICCV, led and released libraries (such as VISSL) and organized challenge at ICCV workshop. * Large scale vision modeling - built largest (to date) dense computer vision models (10billion parameters) and first author of foundational work – ImageNet in 1hour.   **Facebook** Jan 2016 – Sept 2016  *Software Engineer London, UK*   * Built deep learning models to improve the knowledge and entities graph of Facebook. Led the work on building neural networks from highly noisy data. |
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| EDUCATION | **Indian Institute of Technology (IIT) Kanpur** India, 2010 - 2015  *Bachelor and Masters, Mathematics and Scientific Computing*  *M.Sc. Advisor: Prof. Harish Karnick*  Thesis Title: Study of auto-encodings in the hidden units of deep neural networks.  GPA: 9.1/10 (Ranked 2 of 50 in graduating department). |
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| RESEARCH INTERESTS | **Computer Vision / Machine Learning**: learning with limited supervision (from uncurated data).  **Socially Responsible AI**: diagnosing and mitigating harms, model privacy and robustness.  **Large scale vision models**: pushing the limits in terms of data and model scale. |
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| PUBLICATIONS | * *Vision Models Are More Robust And Fair When Pretrained On Uncurated Images Without Supervision* - Priya Goyal, Quentin Duval, Isaac Seessel, Mathilde Caron, Ishan Misra, Levent Sagun, Armand Joulin, Piotr Bojanowski, **arXiv 2022** * *Fairness Indicators for Systematic Assessments of Visual Feature Extractors* - Priya Goyal, Adriana Romero Soriano, Caner Hazirbas, Levent Sagun, Nicolas Usunier, **arXiv, 2022 (under review)** * *A Self-Supervised Descriptor for Image Copy Detection* - Ed Pizzi, Sreya Dutta Roy, Sugosh Nagavara Ravindra, Priya Goyal, Matthijs Douze, **CVPR 2022** * *Fully Sharded Data Parallel: faster AI training with fewer GPUs* - Myle Ott, Sam Shleifer, Min Xu, Priya Goyal, Quentin Duval, Vittorio Caggiano, **Facebook Engineering blog*,* 2021** * *VISSL: A library for state-of-the-art self-supervised learning from images* - Priya Goyal, Quentin Duval, Jeremy Reizenstein, Matthew Leavitt, Min Xu, Benjamin Lefaudeux, Mannat Singh, Vinicius Reis, Mathilde Caron, Piotr Bojanowski, Armand Joulin, Ishan Misra, **2021** * *Self-supervised pretraining of visual features in the wild* - Priya Goyal, Mathilde Caron, Benjamin Lefaudeux, Min Xu, Pengchao Wang, Vivek Pai, Mannat Singh, Vitaliy Liptchinsky, Ishan Misra, Armand Joulin, Piotr Bojanowski, **arXiv 2021** * *Unsupervised Learning of Visual Features by Contrasting Cluster Assignments* - Mathilde Caron, Ishan Misra, Julien Mairal, Priya Goyal, Piotr Bojanowski, Armand Joulin, **NeurIPS 2020** * *Scaling and Benchmarking Self-Supervised Visual Representation Learning* - Priya Goyal, Dhruv Mahajan, Abhinav Gupta\*, Ishan Misra\*, **ICCV 2019** * *The next 700 accelerated layers: From mathematical expressions of network computation graphs to accelerated gpu kernels, automatically* - Nicolas Vasilache, Oleksandr Zinenko, Theodoros Theodoridis, Priya Goyal, Zachary Devito, William S Moses, Sven Verdoolaege, Andrew Adams, Albert Cohen, **ACM TACO 2019** * *Focal Loss for Dense Object Detection* - Tsung-Yi Lin, Priya Goyal, Ross Girshick, Kaiming He, Piotr Dollár, **ICCV 2017 (*best student paper award*)** * *Accurate, Large Minibatch SGD: Training ImageNet in 1 Hour* - Priya Goyal, Piotr Dollár, Ross Girshick, Pieter Noordhuis, Lukasz Wesolowski, Aapo Kyrola, Andrew Tulloch, Yangqing Jia, Kaiming He, **arXiv 2017** |
|  | Tech Reports   * Peer-to-peer insult detection in online communities - Priya Goyal, Gaganpreet Singh Kalra, 2013 |
| WORKSHOP CHALLENGE | **Facebook AI Self-Supervision Learning Challenge** ICCV, 2019  *Extreme Computer Vision Workshop Seoul, Korea*  Organized the first ever [self-supervised challenge](https://sites.google.com/view/fb-ssl-challenge-iccv19) aimed at benchmarking representation learning on a variety of tasks. Wrote the transfer learning code and setup the challenge evaluation/submission server. |
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| INVITED TALKS | * SEER, a self-supervised billion parameter computer vision model - [Facebook AI Innovation Summit, 2021](https://ai.facebook.com/events/facebook-ai-innovation-summit-2021/) * Scaling and Benchmarking Self-Supervised learning – Carnegie Mellon University, April 2019. * Facebook North America Women in AI Leadership Summit, 2019 – 10K attendees. * Imagenet-1k training in 1 hour – Caffe2 Meetup, Hawaii, CVPR 2017 * Imagenet in 1 hour – Deep Learning at Supercomputer Scale, NeurIPS 2017 |
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| AWARDS | * Best Student Paper Award, ICCV 2017. * Facebook Grace Hopper Scholarship, 2014 and Google Global Scholarship, 2013. * Academic Excellence Award 2011-12 and 2012-13 – given to top 5% of 850 students. * Best Poster Award (amongst 60 posters) presented in SURGE, IIT Kanpur 2012. * SURGE undergraduate research fellowship (2012), Indian Institute of Technology (IIT), Kanpur, India. * National Talent Search Scholarship, 2008 – given to top 0.01% high school students all over India. |
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| ACADEMIC SERVICE | Conference reviewer: Computer Vision and Pattern Recognition (2018 – present), International Conference on Computer Vision (2018 – present), European Conference on Computer Vision (2018 – present), International Conference on Learned Representations (2018 – present), International Conference on Machine Learning (2018 – present), Neural Information Processing Systems (2018 – present) |
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| INTERNSHIPS | **Facebook** May-August 2015  *Advisor: Kay Rottmann, Juan Miguel Pino, Language Technology Team Menlo Park, CA, USA*  Built profanity detection classifier to detect profanity in the machine translations produced by Facebook. Built classifier for all the languages and automated the re-training of any classifier.  **Goldman Sachs** May–July 2014  *Advisor: Andrei Bergners, Panna Pavangadkar, Developer Practices Group New York, US*  Built software for making the firm approved SDLC build cloud dynamic and self-aware. The product analyzes nearly 3000 product builds across the firm on daily basis.  **Yahoo!** May–July 2013  *Advisor:* *Bennet Manuel, Yahoo! Right Media Exchange* *Bangalore, India*  Built visualization tool for tracking the usage of web bugs in online display ads to detect malicious vendors - helped increase the revenue of the company by curbing ban on minor defaulters.  **Carnegie Mellon University Winter School** Dec 2012–Jan 2013  *Advisor: Prof. Carolyn P. Rosé, Department of Computer Science, CMU*  Develop an interactive tutor moderated chat system for automated analysis and dynamic support for an online collaborative learning process. Proposed and implemented 2-pass architecture model for modelling the students’ conversation and building an agent prototype capable of detecting distraction/ confusion among students and provide necessary support to ensure effective learning.  **Summer Undergraduate Research Grant for Excellence** May-July 2012  *Advisor: Prof. Akash Anan, Department of Mathematics and Statistics IIT Kanpur, India*  Developed efficient algorithms for projecting the point cloud on the projection surface. Automated the process of 3-D surface generation. |