

Shobhita Sundaram

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ssundaram21.github.io

EDUCATION

Massachusetts Institute of Technology (MIT)	Cambridge, MA
Ph.D. Computer Science	2022–2027
S.M. Computer Science	2022–2025
Advisor: Phillip Isola	
Massachusetts Institute of Technology (MIT)	Cambridge, MA
S.B. Computer Science, S.B. Mathematics	2018–2022
Advisors: Pawan Sinha, Xavier Boix, Tomaso Poggio	

PUBLICATIONS

* indicates equal contribution

1. Better Together: Leveraging Unpaired Multimodal Data for Stronger Unimodal Models.
S. Gupta, **S. Sundaram**, C. Wang, S. Jegelka, P. Isola. *Preprint*.
2. What Makes for a Good Stereoscopic Image?
N. Tamir, S. Amir, R. Itzhaky, N. Atia, **S. Sundaram**, S. Fu, R. Sokolovsky, P. Isola, T. Dekel, R. Zhang, M. Farber. *CVPR Computer Vision for Metaverse Workshop*, 2025.
3. Personalized Representation from Personalized Generation.
S. Sundaram*, J. Chae*, Y. Tian, S. Beery, P. Isola. *ICLR*, 2025.
4. When Does Perceptual Alignment Benefit Vision Representations?
S. Sundaram*, S. Fu*, L. Muttenthaler, N. Tamir, L. Chai, S. Kornblith, T. Darrell, P. Isola. *NeurIPS*, 2024.
5. DreamSim: Learning New Dimensions of Human Visual Similarity using Synthetic Data.
S. Fu*, N. Tamir*, **S. Sundaram***, L. Chai, R. Zhang, T. Dekel, P. Isola. *NeurIPS*, 2023 (**spotlight**).
6. Recurrent Connections Facilitate Symmetry Perception in Deep Networks.
S. Sundaram*, D. Sinha*, M. Groth, T. Sasaki, X. Boix. *Scientific Reports*, 2022.
7. GAN-Based Data Augmentation for Chest X-ray Classification.
S. Sundaram* and N. Hulkund*. *KDD Workshop on Applied Data Science for Healthcare*, 2021.
8. Do Neural Networks for Segmentation Understand Insideness?
K. Villalobos*, V. Štih*, A. Ahmadinejad*, **S. Sundaram**, J. Dozier, A. Franci, F. Azevdo, T. Sasaki, X. Boix. *Neural Computation*, 2021.

EXPERIENCE

FAIR	Paris, France
Research Scientist Intern	May - October 2025
– <i>Project</i> : LLM self-improvement for difficult reasoning problems with meta-RL.	
– <i>Mentors</i> : Julia Kempe, Yann Olivier, Kartik Ahuja	
Google Research	Cambridge, MA
Student Researcher	December 2023 - March 2024
– <i>Project</i> : Synthetic data generation with diffusion models for personalizing vision backbones.	

- *Mentors:* Yonglong Tian, Dilip Krishnan

Google DeepMind

Research Engineering Intern

London, UK
June - August 2022

- *Project:* Data selection for LLM pretraining.
- *Mentors:* Sebastian Borgeaud, Laurent Sifre, Jordan Hoffman, Arthur Mensch

Center for Brains, Minds, and Machines, MIT

Undergraduate Researcher

Cambridge, MA
September 2019 - May 2022

- *Project:* Recurrent vision models for visual long-range spatial dependencies.
- *Mentors:* Xavier Boix, Pawan Sinha, Tomaso Poggio

The D. E. Shaw Group

Quantitative Research Intern

New York, NY
June - August 2021

- *Project:* RL tools for portfolio management; outperformed optimal control theory baselines.
- *Mentor:* Konstantin Turitsyn

Apple

Machine Learning Intern

Cupertino, CA
June - August 2020

- *Project:* Built and deployed an end-to-end ML pipeline on-device for power optimization.

Two Sigma Investments

Software Engineering Intern

Houston, TX
May - August 2019

- *Project:* A RESTful Flask service and UI to track collections of trading instruments.

AWARDS

NSF Graduate Research Fellowship	2022 - 2025
HDTV Grand Alliance Fellowship	2022 - 2023
MIT Undergraduate Research and Innovation Scholar	2020
MIT Burchard Scholar	2020

SERVICE & LEADERSHIP

Organizer: CVPR Workshop on Synthetic Data for Computer Vision	2024, 2025
Organizer: ECCV Tutorial on Efficient Text-to-Image Modeling	2024
Mentor: MIT Graduate Application Assistant Program	2022 - 2024
Event Coordinator: MIT Graduate Women of EECS	2023
Associate Editor: MIT Science Policy Review	2020 - 2022

INVITED TALKS

Personalized Representation from Personalized Generation.	
CVPR Syntagen Workshop	June 2025
Cohere for AI	March 2025
Representation Learning with Perceptual Alignment.	
Stanford NeuroAILab	April 2025
Evaluating Text-to-Image Models.	
ECCV Efficient Text-to-Image Modeling Tutorial	September 2024
DreamSim: Learning New Dimensions of Human Visual Similarity using Synthetic Data.	
Adobe	October 2023
Computer Vision Meetup, hosted by Voxel51	July 2023