

Sebastian “Sebo” Diaz

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Research Interests

My research interests include representation learning, convex optimization, data augmentation, generalization, and registration, with an emphasis on the foundations of robust machine learning.

Education

Massachusetts Institute of Technology Ph.D. in HST (Computer Science)	2023 – Dec 2027 (Expected) GPA: 5.00/5.00
University of Arizona B.S. in Biomedical Engineering; Minor in Mathematics	2019 – 2023 GPA: 3.95/4.00

Industry Experience

Engine Ventures, Tech Venture Fellow • Work part-time with the investment team on emerging technologies.	Oct 2026 – Present
Stealth Startup, AI Research • Led post-training research for V/LLMs & long-horizon evaluations.	May 2026 – Sep 2026

Selected Publications (Lead Author)

[1] Diaz et al.	<i>Why Invariance is Not Enough for Biomedical Domain Generalization and How to Fix It.</i>	NeurIPS 2026
[2] Diaz et al.	<i>Robust Fetal Pose Estimation across Gestational Ages via Cross-Population Augmentation.</i>	MICCAI 2025
[3] Diaz et al.	<i>Design of Novel RF Pulse for Fetal MRI Refocusing Trains Using Rank Factorization (SLfRank) to Reduce SAR and Improve Image Acquisition Efficiency.</i>	ISMRM 2022

Fellowships & Awards

NeurIPS Top Reviewer Recognition	2026
NSF Graduate Research Fellowship Program	2024
MathWorks Graduate Fellowship	2024
MIT School of Engineering Distinguished Graduate Student Fellowship	2023
MIT Program for Exemplary Mentoring Fellowship	2023
Goldwater STEM Scholarship	2022
Udall Native Health Care Scholar	2021

Invited Talks

Why Invariance is Not Enough for Biomedical Domain Generalization and How to Fix It MIT CSAIL Visual Computing Seminar, Cambridge, MA	Oct 2026
RepreSeg: Stable Representations for Domain Generalized Segmentation MIT IMES Seminar, Cambridge, MA	Dec 2025
Learning Alongside Invariant Representations: Robust Generalization in Medical Imaging MIT IMES Department Retreat, Boston, MA	Sep 2025

Technical Skills & Service

Machine Learning	Deep learning, computer vision, reinforcement learning, representation learning
Methods	Numerical optimization, probability, medical image analysis
Coursework	MIT: Deep Learning, Numerical Methods, Computer Vision; Harvard Medical School: Pathology, Immunology, Genetics
Service	Reviewer: CVPR 2026, NeurIPS 2026, MICCAI PIPPI 2025–2026