

Pedro Sandoval Segura

CONTACT INFORMATION	3116 Brendan Iribe Center 8125 Paint Branch Drive College Park, MD 20742	(415) 324 9232 psando@cs.umd.edu http://cs.umd.edu/~psando
RESEARCH INTERESTS	I am broadly interested in computer vision and deep learning. My research has explored vulnerabilities of neural networks including adversarial examples and dataset poisoning. I am interested in how characteristics of image datasets impact learning.	
EDUCATION	University of Maryland , College Park, MD Ph.D., Computer Science	Expected 2025
	M.S., Computer Science	May 2021
	Harvey Mudd College , Claremont, CA B.S., Computer Science and Mathematics <i>Graduated with High Distinction</i>	May 2019
RESEARCH EXPERIENCE	Apple , Cupertino, CA <i>Deep Learning Research Intern (Apple Maps)</i> <ul style="list-style-type: none">Investigated application of Encoder-Decoder Transformers for use in vectorization of geospatial dataPresented to Maps leadership, where results were described as a “breakthrough”Working with Dr. Yonghong Wang	Summer 2023
	Amazon Lab126 , Sunnyvale, CA <i>Applied Scientist Intern</i> <ul style="list-style-type: none">Analyzed approaches for training NeRF models and proposed a method for consistent depth estimationWorking with Dr. Chi Liu and Dr. Albert Chen	Summer 2022
	U.S. Naval Research Laboratory , Washington, D.C. <ul style="list-style-type: none">Investigating adversarial examples, robustness, and interpretability in meta-learning approaches for few-shot learningSubmitted findings to 5th Workshop on Meta-Learning at NeurIPS 2021Working with Dr. Ed Lawson	Summer 2021
INDUSTRY EXPERIENCE	Facebook, Inc. , Seattle, WA <i>Software Engineering Intern</i> <ul style="list-style-type: none">Implemented and monitored new share flow functionality for encrypted Messenger threads, allowing users to forward text, sticker, photo, audio, and video securelyReceived a full-time offer at the conclusion of internship	Summer 2018
	Facebook, Inc. , Menlo Park, CA <i>Software Engineering Intern</i> <ul style="list-style-type: none">Designed and built a new Messenger Groups Tab approvals surface, enabling users to accept join requests across multiple group threadsOversaw, implemented, and ran an A/B test interleaving active groups in the Active Tab which drove topline metrics such as group sends and group creates	Summer 2017

- Organized engineering tasks, drafted feature ideas, and collaborated with a team of 3 to build InSync, an iOS app which synchronizes music on multiple devices

PUBLICATIONS

8. Singla, **Sandoval-Segura**, Goldblum, Geiping, Goldstein. “A Simple and Efficient Baseline for Data Attribution on Images”. *NeurIPS Workshop on Attributing Model Behavior at Scale (ATTRIB)*, 2023.
7. **Sandoval-Segura**, Singla, Geiping, Goldblum, Goldstein. “What Can We Learn from Unlearnable Datasets?”. *Advances in Neural Information Processing Systems 37* (NeurIPS), 2023. (26.1% acceptance rate)
6. **Sandoval-Segura**, Singla, Geiping, Goldblum, Goldstein, Jacobs. “Autoregressive Perturbations for Data Poisoning”. *Advances in Neural Information Processing Systems 36* (NeurIPS), 2022. (25.6% acceptance rate)
5. **Sandoval-Segura**, Singla, Fowl, Geiping, Goldblum, Jacobs, Goldstein. “Poisons that are learned faster are more effective”. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*, 2022.
4. Bashir, Montañez, Sehra, **Sandoval-Segura**, Lauw. “An Information-Theoretic Perspective on Overfitting and Underfitting”. In *Australasian Joint Conference on Artificial Intelligence (AJCAI)*, 2020.
3. **Sandoval-Segura**, Lauw, Bashir, Shah, Sehra, Macias, Montañez. “The Labeling Distribution Matrix (LDM): A Tool for Estimating Machine Learning Algorithm Capacity”. *12th International Conference on Agents and Artificial Intelligence (ICAART)*, 2020.
2. Drissi, **Sandoval**, Ojha, Medero. “Harvey Mudd College at SemEval-2019 Task 4: The Clint-Buchanan Hyperpartisan News Detector”. In *Proceedings of The 13th International Workshop on Semantic Evaluation (SemEval)*, 2019.
1. Drissi, Watkins, Khant, Ojha, **Sandoval**, Segev, Weiner, Keller. “Programming Language Translation using a Grammar-Driven Tree-to-Tree Model”. *ICML Workshop on Neural Abstract Machines and Program Induction v2 (NAMPI)*, 2018.

HONORS AND AWARDS

National Defense Science and Engineering Graduate Fellowship	2023
Amazon Lab126 Diversity in Robotics and AI Fellowship	2021 - 2022
NeurIPS Scholar Award (\$1,625)	2022
Google CS Research Mentorship Program (CSRMP)	2021
Richard Tapia Conference Scholarship	2020
CRA-WP Grad Cohort for URMD	2020
UMD International Conference Student Support Award (\$500)	2020
UMD Dean’s Fellowship Program (\$5,000)	2019 - 2020
ARCS Scholarship, Los Angeles Chapter	2016 - 2019
Students Rising Above Scholarship	2015 - 2019

TEACHING EXPERIENCE

CMSC421: Introduction to Artificial Intelligence Graduate Teaching Assistant, University of Maryland	Spring 2021
CMSC421: Introduction to Artificial Intelligence Graduate Teaching Assistant, University of Maryland	Fall 2020
CMSC436: Programming Handheld Systems Graduate Teaching Assistant, University of Maryland	Fall 2019

	CS81: Computability and Logic Teaching Assistant, Harvey Mudd College	Spring 2019
	MATH187: Operations Research Grader, Harvey Mudd College	Spring 2019
LEADERSHIP AND OUTREACH	Reviewer for CVPR 2024 Reviewer for NeurIPS 2023, BUGS Workshop Volunteer for NeurIPS 2023 Workshop Speaker at 17th Annual Winter Student Leadership Retreat (WSLR) Reviewer for 1st International Conference on Automated ML Reviewer for 5th Workshop on Meta-Learning at NeurIPS CS Department M.S. and Ph.D. Admissions Committee UMD Graduate Student Government Representative JumpStart Computing Workshop, Iribe Initiative for Inclusion & Diversity in Computing	Spring 2024 Fall 2023 Fall 2023 Spring 2023 Spring 2022 Fall 2021 Spring 2020 Fall 2019 Fall 2019
TECHNICAL BACKGROUND	Languages: Python, Java, C, C++, Objective-C, Swift, Go, Haskell, AMPL, Arduino Software: PyTorch, Git, GitHub, Mercurial, Mathematica, MATLAB, Xcode	
PERSONAL INFORMATION	Citizenship: United States Language: English, Spanish	