Pedro Sandoval Segura

CONTACT
INFORMATION

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RESEARCH
INTERESTS

I am broadly interested in computer vision and deep learning. Lately, my research focuses on adversarial examples and the benefits of adversarial training.

EDUCATION

University of Maryland, College Park, MD
    Ph.D., Computer Science   Expected 2024
    Amazon Lab126 Diversity in Robotics and AI Fellow

    M.S., Computer Science   May 2021
    Scholarly Paper: "Adversarially Robust Segmentation Models
    Learn Perceptually-aligned Gradients"

Harvey Mudd College, Claremont, CA
    B.S., Computer Science and Mathematics   May 2019
    Graduated with High Distinction

RESEARCH
EXPERIENCE

Computer Vision Laboratory, University of Maryland   Aug 2020 - Present
Working with Prof. David Jacobs
- Studying adversarial attacks and defenses for image classification and segmentation

U.S. Naval Research Laboratory, Washington, D.C.   Summer 2021
Working with Dr. Ed Lawson
- Investigating adversarial examples, adversarial robustness, and interpretability in meta-learning approaches for few-shot learning
- Submitted findings to 5th Workshop on Meta-Learning at NeurIPS 2021

INDUSTRY
EXPERIENCE

Facebook, Inc.   Summer 2018
Software Engineering Intern, Project LightSpeed
- Implemented and monitored new share flow functionality for encrypted Messenger threads, allowing users to forward text, sticker, photo, audio, and video securely
- Received a full-time offer at the conclusion of internship

Facebook, Inc.   Summer 2017
Software Engineering Intern, Messenger Groups
- Designed and built MVVM architecture for a new Groups Tab approvals surface, enabling users to accept join requests across multiple group threads
- Oversaw, 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

Facebook, Inc.   Summer 2016
Facebook University for Engineering Intern
- 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

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

HONORS AND AWARDS	Amazon Lab126 Diversity in Robotics and AI Fellow	2021 - 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	2020
	UMD Dean's Fellowship Program	2019 - 2020
	ARCS Scholarship, Los Angeles Chapter	2016 - 2019
	Students Rising Above Scholarship	2015 - 2019

PUBLICATIONS

6. **Sandoval-Segura**, Singla, Jacobs. "Adversarial Training Variants for Robust Semantic Segmentation". *Under Review* at 2nd Pre-Registration Workshop at NeurIPS 2021.

5. **Sandoval-Segura**, Lawson. "AutoProtoNet: Interpretability for Prototypical Networks". *Under Review* at 5th Workshop on Meta-Learning at NeurIPS 2021.

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. arXiv:1912.10597

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. arXiv:1905.01962

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. arXiv:1807.01784

LEADERSHIP AND OUTREACH	CS Department M.S. and Ph.D. Admissions Committee	Spring 2020
	UMD Graduate Student Government Representative	Fall 2019
	JumpStart Computing Workshop, Iribe Initiative for Inclusion & Diversity in Computing	Fall 2019

PERSONAL INFORMATION	Citizenship: United States
	Language: English, Spanish