## Pedro Sandoval Segura

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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"

 ${\bf Harvey\ Mudd\ College},\ {\bf Claremont},\ {\bf CA}$ 

B.S., Computer Science and Mathematics Graduated with High Distinction

May 2019

RESEARCH EXPERIENCE  ${\bf Computer\ Vision\ Laboratory},\ {\bf University\ of\ Maryland}$ 

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 Google CS Research Mentorship Program (CSRMP) Richard Tapia Conference Scholarship CRA-WP Grad Cohort for URMD UMD International Conference Student Support Award UMD Dean's Fellowship Program ARCS Scholarship, Los Angeles Chapter Students Rising Above Scholarship	2021 - 2022 2021 2020 2020 2020 2019 - 2020 2016 - 2019 2015 - 2019
Publications	A. Bashir, Montañez, Sehra, <b>Sandoval-Segura</b> , Lauw. "An Information-Theoretic Perspective on Overfitting and Underfitting". In <i>Australasian Joint Conference on Artificial Intelligence (AJCAI)</i> , 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, <b>Sandoval</b> , Ojha, Medero. "Harvey Mudd College at SemEval-2019 Task 4: The Clint-Buchanan Hyperpartisan News Detector". In <i>Proceedings of The 13th International Workshop on Semantic Evaluation (SemEval)</i> , 2019. arXiv:1905.01962	
	1. Drissi, Watkins, Khant, Ojha, <b>Sandoval</b> , Segev, Weiner, Keller. "Programming Language Translation using a Grammar-Driven Tree-to-Tree Model". <i>ICML Workshop on Neural Abstract Machines and Program Induction v2 (NAMPI)</i> , 2018. arXiv:1807.01784	
LEADERSHIP AND OUTREACH	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 2020 Fall 2019 Fall 2019
Personal Information	Citizenship: United States Language: English, Spanish	