

Avni Kothari

CURRICULUM VITAE — NOVEMBER 2022

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[GitHub](#) | [Website](#) | [LinkedIn](#)

EDUCATION	University of California San Diego Master's Student Computer Science DeepMind Fellow Advisors: Berk Ustun and Lily Weng Research Topics: Recourse, AI fairness Relevant Coursework: Trustworthy Machine Learning; Machine Learning Algorithms; Probabilistic Reasoning and Learning; Recommender Systems; Neural Networks and Pattern Recognition	PRESENT GPA: 3.74/4.0
	University of Texas at Austin BA in Mathematics BA in Economics Minor in Computer Science Relevant Coursework: Introduction to Real Analysis; Introduction to Number Theory; Elements of Software Design; Discrete Mathematics; Linear Algebra and Matrix Theory; Elements of Databases; Elements of Programming Languages	MAY 2016 GPA: 3.72/4.0
RESEARCH EXPERIENCE	University of California at San Diego <i>Graduate Student Researcher</i> Primary contributor for researching infeasibility in recourse which creates definitions and metrics for fair machine learning models Creating a Mixed Integer Program in CPLEX to detect infeasibility in datasets Write proofs and definitions to generalize our findings Lead and set goals for weekly research meetings	MARCH 2022 – PRESENT
INDUSTRY EXPERIENCE	Edovo <i>Software Engineer</i> Individually redesigned and rearchitected the backbone service of the platform using Elasticsearch, Java, and Javascript/ React to handle over 700k requests per day Worked on compressing 4 billion rows of event data to reduce our storage space Organized sessions for the team to have dedicated time to discuss best software practices and new technology	JANUARY 2020 – MAY 2021
	8th Light <i>Lead Software Engineer</i> Worked with a small team on a greenfield project to build out a diabetes management iPhone application with an Elixir Phoenix backend and React and Swift/iOS frontends Worked on a continuous deployment team writing Java while integrating with internal tools in a complex ecosystem Committed to continuous learning and sharing my knowledge by frequent pair programming and giving talks to apprentices Provided frequent mentoring and peer code feedback through extended code reviews	AUGUST 2017 – MARCH 2019
	<i>Resident Apprentice</i> Focused on Test Driven Development, SOLID Design, and agile development Completed projects in Ruby, Sinatra, Clojure, Java, Ruby on Rails, Elixir Phoenix, and Elm Gave talks on "Hashing Functions" and "Fun with Prime Numbers"	JANUARY 2017 – AUGUST 2017
AWARDS & HONORS	DeepMind Fellow Master's funding and mentorship from Deepmind Article	2021

TEACHING

EXPERIENCE

TA for DSC 291 - Interpretability and Explainability in Machine Learning
Course taught by: [Berk Ustun](#)

FALL 2022

Differential Calculus Tutor

MAY 2011 – AUGUST 2013

PUBLICATIONS

1. [On Predictions Without Recourse](#)

Avni Kothari, Berk Ustun, Lily Weng

Pre-print, December 2022

Recourse is not always obtainable for all individuals. This paper investigates and formalizes scenarios of no recourse. We argue the importance of these scenarios for both model development and recourse detection methods.

SERVICE

PenPal for the Incarcerated

SEPTEMBER 2020 – PRESENT

Volunteer

Biweekly letters and video chats with an incarcerated individual

Investigate and reach out to companies for hiring an incarcerated individual post release

Warren Community Garden

AUGUST 2021 – PRESENT

Volunteer

Maintain produce and composting through weekly volunteering

Donate produce from the garden to food pantries

The Recyclery

AUGUST 2018 – MAY 2021

Financial Committee Member

Volunteered to help individuals in the community repair their bikes

Financially planned the budget for this non-profit bike shop

PERSONAL

Citizenship United States, United Kingdom, and India

Software Pytorch, CPLEX, AWS, Java, React, Elasticsearch, Elixir, Test Driven Development, & Terraform

Interests Cycling, Gardening, and Knitting