

Matthew Landers

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Research Interests	Deep reinforcement learning, offline reinforcement learning, real-world reinforcement learning	
Education	University of Virginia , Charlottesville, VA	2021-2026
	Ph.D., computer science Advisors: Dr. Thomas Hartvigsen and Dr. Afsaneh Doryab GPA: 4.0	
	Johns Hopkins University , Baltimore, MD	2019-2021
	M.S., computer science Advisor: Dr. Suchi Saria GPA: 4.0	
	Indiana University, Kelley School of Business , Bloomington, IN	2008-2012
	B.S., entrepreneurship and corporate innovation	
Publications	[1] Matthew Landers , Taylor Killian, Tom Hartvigsen, Afsaneh Doryab. “Improving and Accelerating Offline RL in Large Discrete Action Spaces with Structured Policy Initialization” ICLR, 2026.	
	[2] Matthew Landers , Taylor Killian, Hugo Barnes, Tom Hartvigsen, Afsaneh Doryab. “BraVE: Offline Reinforcement Learning for Discrete Combinatorial Action Spaces” NeurIPS, 2025.	
	[3] Matthew Landers , Taylor Killian, Tom Hartvigsen, Afsaneh Doryab. “SAINT: Attention-Based Modeling of Sub-Action Dependencies in Multi-Action Policies” <i>Under review</i> .	
	[4] Matthew Landers , Afsaneh Doryab. “Parameter Transfer for Single-Task Reinforcement Learning.” International Joint Conference on Neural Networks, 2025.	
	[5] Matthew Landers , Afsaneh Doryab. “Deep Reinforcement Learning Verification: A Survey.” ACM Computing Surveys, 2023.	
	[6] Echo Wang*, Matthew Landers* , Roy Adams*, Adarsh Subbaswamy, Hadi Kharrazi, Darrell Gaskin, Suchi Saria. “A bias evaluation checklist for predictive models and its pilot application for 30-day hospital readmission models.” Journal of the American Medical Informatics Association, 2022.	
	[7] Matthew Landers , Ray Dorsey, Suchi Saria. “Digital Endpoints: Definition, Benefits, and Current Barriers in Accelerating Development and Adoption.” Digital Biomarkers, 2021.	
	[8] Matthew Landers , Suchi Saria, Alberto Espay. “Artificial Intelligence Replace the Movement Disorders Specialist for Diagnosing and Managing Parkinson’s Disease?” Journal of Parkinson’s Disease, 2021.	
	[9] Chen Qian, Patraporn Leelaprachakul, Matthew Landers , Carissa Low, Anind K . Dey, Afsaneh Doryab. “Prediction of Hospital Readmission from Longitudinal Mobile Data Streams.” Sensors, 2021.	
	* indicates equal contribution	
Technical Writing	Maintain long-form technical notes on reinforcement learning and optimization, emphasizing clarity, derivations, and practical algorithms on mattlanders.net	2021-PRESENT

Industry Experience	<p>Senior Software Engineer, Stride Consulting 2017-2019</p> <p>Client: Schonfeld Strategic Advisors</p> <ul style="list-style-type: none"> • Built stateless Python services and stateful Java services to efficiently process billions of dollars in trades • Improved system latency from 1.1 seconds to 15 milliseconds and reduced system recovery time from 2 hours to less than 5 minutes by changing data transfer method from HTTP to Kafka <p>Client: Peloton Interactive</p> <ul style="list-style-type: none"> • Led development of payment processing and order fulfillment tools for Australian launch • Designed and implemented an approach to facilitate communication with new Enterprise Resource Planner <p>Client: Magnetic</p> <ul style="list-style-type: none"> • Rebuilt core platform growing monthly recurring revenue from \$1,000,000 to \$6,000,000 • Engineered Python microservices that allowed users to manage each component of an online advertisement including audience definition, budget selection, and media creation • Built microservices that published advertisements to 7 different networks
	<p>Software Engineer, Human API 2016-2017</p> <ul style="list-style-type: none"> • Worked with data science and product teams to build integration solutions for 40+ customers • Engineered custom products for 30+ clients including a user health timeline for Samsung • Devised a partnership plan with executives from Merck Germany
	<p>Co-founder & CEO, Stonecrysus 2013-2016</p> <ul style="list-style-type: none"> • Developed a machine learning health platform that earned 4 United States patents • Worked with an electrical engineering and design firm to manufacture a proprietary fitness wearable • Presented 3 times to groups of 300+ people, including at CES • Negotiated with organizations such as Samsung, Amazon, and the US Olympic Committee • Designed and built a web platform that allowed health practitioners to access and analyze patient data
	<p>Co-founder & President, Synduit 2012-2013</p> <ul style="list-style-type: none"> • Grew monthly recurring revenue from \$0 to \$100,000+ in less than 1 year with a team of 2 people • Drove profit margin to 80% by managing construction of a machine learning-based automation platform • Managed 12 employee team while building client base to 120+ businesses
	<p>Intern, Tradeweb Markets 2010, 2011</p>
Awards	<p>University of Virginia Endowed Graduate Fellowship 2024</p>
Teaching	<p>University of Virginia</p> <p>Teaching Assistant, AI for Social Good 2021</p> <p>Teaching Assistant, Artificial Intelligence 2023, 2024</p> <p>Johns Hopkins University</p> <p>Course Assistant, Data Structures 2019, 2020</p>
Mentorship	<p>University of Virginia Graduate School Mentor Program 2022</p> <p>UVA Computer Science Graduate Student Group Mentorship Program 2021</p> <p>Engineering Manager, Stride Consulting 2018-2019</p> <p>Stride Consulting Mentorship Program 2017-2019</p>
Service	<p>Reviewer</p> <p>ICML 2026</p> <p>AISTATS 2025, 2026</p>

ICLR	2025,2026
NeurIPS	2024,2025
ACM Computing Surveys	2024
KDD	2024
UbiComp	2022,2023
CHI	2023

Student Volunteer

UbiComp	2021, 2022
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Patents

us 9,317,815: Health and fitness management system	ISSUED 2016
us 9,183,498: Health and fitness management system	ISSUED 2015
us 8,892,481: Health and fitness management system	ISSUED 2014
us 8,600,928: Health and fitness management system	ISSUED 2013