

Michael Fishman

Education

- 2016 – 2018 **Master of Science in Mathematics**
University of Miami, Coral Gables, FL.
Coursework included Abstract Algebra, Algebraic Topology, \mathbb{R} and \mathbb{C} Analysis, Symmetric Functions.
- 2013 – 2016 **Bachelor of Science in Mathematics and Computer Science, Minor in Economics**
University of Miami (Honors College), Coral Gables, FL.
Coursework included Differential Equations, Computer Graphics, Theory of Computing, Software Engineering.
Graduated with Honors.

Experience

- August 2023 – Present **Robotist - Machine Learning Engineer**
Robotics and AI Institute (RAI) (Machine Learning Engineering Team), Cambridge, Massachusetts.
Built model inference platform. Sped up model inference. Sped up RL simulation and training for manipulation. Parallelized RL training and evaluation using Kubernetes.
- May 2022 – May 2023 **Software Engineer**
Blue Apron (Machine Learning Team), New York, New York (Remote).
Cleaned up tech debt, reducing the time it takes for the ML team to support and modify our forecasts and product recommendations. Improved visibility and problem detection in our pipelines. Built library to manipulate and combine probability distributions more clearly and automatically detect ill defined and incompatible distributions.
- January 2020 – April 2022 **Machine Learning Engineer, Sr.**
Office Depot (Advanced Analytics, Center for Excellence), Boca Raton, FL.
Developed, deployed, and maintained machine learning models to predict customer behaviour and target marketing campaigns. Performed statistical analysis for marketing experiments. Improved model development, deployment, and evaluation processes. Created feature store for extracting highly parameterized features from a database.
- June 2018 – August 2019 **Research Assistant**
Brown University's Humans To Robots Lab (H2R), Providence, RI.
Assisted in robotics research at the H2R. Modeled multi-modal human-robot interaction to facilitate decision-making under uncertainty, implemented planning algorithms, and used ROS to make a robot act out these plans.

Skills

- Languages Python (expert), SQL (proficient), Rust (dabbling), L^EV^AN (dabbling)
- ML/Data PyTorch, scikit-learn, pandas, NumPy, SymPy, Reinforcement Learning
- Other git, Opentelemetry, DataDog, Docker, Kubernetes, Devcontainers, GCP, AWS

Publications

Michael Fishman*, Nishanth Kumar*, Cameron Allen, Natasha Danas, Michael Littman, Stefanie Tellex, and George Konidaris (***These authors contributed equally**). Task scoping: Generating task-specific abstractions for planning in open-scope models, 2023 (Arxiv Preprint).

Eric Rosen*, David Whitney*, **Michael Fishman***, Daniel Ullman, and Stefanie Tellex (***These authors contributed equally**). Mixed reality as a bidirectional communication interface for human-robot interaction. In *2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2020. Finalist for Best Paper award.

A. Wandzel, Y. Oh, **M. Fishman**, N. Kumar, L. L. S. Wong, and S. Tellex. Multi-object search using object-oriented pomdps. In *2019 International Conference on Robotics and Automation (ICRA)*, pages 7194–7200, May 2019.