Aravind Rajeswaran

Researcher with expertise in AI Agents,
World Models, and Robotics
Location: Seattle, Washington, USA

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Employment

Microsoft - Principal Researcher — *July 2025 - present*
Grounding, SFT, and RL for computer use agents (CUA)

Meta Platforms (FAIR) - Research Scientist — *April 2021 - April 2025*
Foundation models for Embodied AI

Google Brain - Research Internship — *June 2019 - May 2020*
World models and reinforcement learning for robotics

OpenAI - Research Internship — *June 2017 - Sep 2017*
Algorithms for dexterous robot hands and multi-agent RL

Education

University of Washington Seattle — *Sep 2016 – June 2021*
Ph.D. in Computer Science & Engineering
Advisers: Profs. Sham Kakade and Emo Todorov

Indian Institute of Technology Madras, BTech (Hons.) — *Aug 2011 – July 2015*
Advisers: Profs. Balaraman Ravindran and Shankar Narasimhan

Academic awards

- Best paper award at the ICRA 2022 Scaling Robot Learning Workshop — *2022*
- Best paper award finalist at the RSS 2022 Scaling Robot Learning Workshop — *2022*
- J. P. Morgan PhD Fellowship in AI — *2020*
- Facebook PhD fellowship finalist in ML — *2020*
- Best paper award at IEEE SIMPAR — *2018*
- University of Washington PhD fellowship — *2016*
- Bhagyalakshmi and Krishna Ayengar award for best undergraduate thesis. — *2015*

Publications

[1] *Locate 3D: Real-World Object Localization via Self-Supervised Learning in 3D*
S. Arnaud et al. A. Rajeswaran*, F. Meier* (* equal contributions)
International Conference on Machine Learning (**ICML**) 2025. **(Spotlight)**

[2] *OpenEQA: Embodied Question Answering in the Era of Foundation Models*
A. Majumdar, et al. A. Rajeswaran
Computer Vision and Pattern Recognition (**CVPR**) 2024.

[3] *From LLMs to Actions: Latent Codes as Bridges in Hierarchical Robot Control*
Y. Shentu, P. Wu, A. Rajeswaran, P. Abbeel
International Conference on Intelligent Robots and Systems (**IROS**) 2024.

[4] *Modem-v2: Visuo-Motor World Models for Real-World Robot Manipulation*
P. Lancaster, N. Hansen, A. Rajeswaran, V. Kumar
International Conference on Robotics and Automation (**ICRA**) 2024.

[5] *Robohive: A Unified Framework for Robot Learning*
V. Kumar, R. Shah, G. Zhou, V. Moens, V. Caggiano, A. Gupta, A. Rajeswaran
Advances in Neural Information Processing Systems (**NeurIPS**) 2023.

[6] *Where are we in the search for an Artificial Visual Cortex for Embodied Intelligence?*
A. Majumdar, et al., A. Rajeswaran*, F. Meier*
Advances in Neural Information Processing Systems (**NeurIPS**) 2023.

[7] *Masked Trajectory Models for Prediction, Representation, and Control*
P. Wu, A. Majumdar, K. Stone, Y. Lin, I. Mordatch, P. Abbeel, A. Rajeswaran
International Conference on Machine Learning (**ICML**), 2023

[8] *On Pre-Training for Visuo-Motor Control: Revisiting a Learning-from-Scratch Baseline*
N. Hansen, Z. Yuan, Y. Ze, T. Mu, A. Rajeswaran, H. Su, H. Xu, X. Wang
International Conference on Machine Learning (**ICML**), 2023

[9] *MoDem: Accelerating Visual Model-Based Reinforcement Learning with Demonstrations*
N. Hansen, Y. Lin, H. Su, X. Wang, V. Kumar, A. Rajeswaran
International Conference on Learning Representations (**ICLR**) 2023.

[10] *Real World Offline Reinforcement Learning with Realistic Data Source*
G. Zhou, L. Ke, S. Srinivasa, A. Gupta, A. Rajeswaran, V. Kumar
International Conference on Robotics and Automation (**ICRA**) 2023.

[11] *R3M: A Universal Visual Representation for Robot Manipulation*
S. Nair, A. Rajeswaran, V. Kumar, C. Finn, A. Gupta
ICRA 2022 Scaling Robot Learning Workshop **(Best Paper Award)**
Conference on Robot Learning (**CoRL**), 2022.

[12] *The (Un)Surprising Effectiveness of Pre-Trained Vision Models for Control*
A. Rajeswaran*, S. Parisi*, S. Purushwalkam, A. Gupta
International Conference on Machine Learning (**ICML**), 2022. **(Long Oral)**

[13] *CIC: Contrastive Intrinsic Control for Unsupervised Skill Discovery*
M. Laskin, H. Liu, X.B. Peng, D. Yarats, A. Rajeswaran, P. Abbeel
Advances in Neural Information Processing Systems (**NeurIPS**) 2022.

[14] *Can Foundation Models Perform Zero-Shot Task Specification For Robot Manipulation?*
Y. Cui, S. Niekum, A. Gupta, V. Kumar, A. Rajeswaran
RSS 2022 Scaling Robot Learning Workshop. **(Best Paper Award Finalist)**
Learning for Dynamics and Control (**L4DC**), 2022.

[15] *Decision Transformer: Reinforcement Learning via Sequence Modeling*
L. Chen*, K. Lu*, A. Rajeswaran, K. Lee, A. Grover, M. Laskin,
P. Abbeel, A. Srinivas, I. Mordatch
Advances in Neural Information Processing Systems (**NeurIPS**), 2021.

[16] *Visual Adversarial Imitation Learning using Variational Models*
R. Rafailov, T. Yu, A. Rajeswaran, C. Finn
Advances in Neural Information Processing Systems (**NeurIPS**), 2021.

[17] *COMBO: Conservative Offline Model-Based Policy Optimization*
T. Yu*, A. Kumar*, R. Rafailov, A. Rajeswaran, S. Levine, C. Finn
Advances in Neural Information Processing Systems (**NeurIPS**), 2021.

[18] *Reinforcement Learning with Latent Flow*
W. Shang*, X. Wang*, A. Srinivas, A. Rajeswaran, Y. Gao, P. Abbeel, M. Laskin
Advances in Neural Information Processing Systems (**NeurIPS**), 2021.

[19] *Behavioral Priors & Dynamics Models: Improving Performance and Domain Transfer in Offline RL*
C. Cang, A. Rajeswaran, P. Abbeel, M. Laskin
Pre-print 2021, *arXiv: 2106.09119*

[20] *Offline Reinforcement Learning from Images with Latent Space Models*
R. Rafailov*, T. Yu*, A. Rajeswaran, C. Finn
Learning for Dynamics and Control (**L4DC**), 2021.

[21] *MOReL: Model-Based Offline Reinforcement Learning*
R. Kidambi*, A. Rajeswaran*, P. Netrapalli, T. Joachims
Advances in Neural Information Processing Systems (**NeurIPS**), 2020.

[22] *A Game Theoretic Framework for Model Based Reinforcement Learning*
A. Rajeswaran, I. Mordatch, V. Kumar
International Conference on Machine Learning (**ICML**), 2020.

[23] *Lyceum: An efficient and scalable ecosystem for robot learning.*
C. Summers, K. Lowrey, A. Rajeswaran, S. Srinivasa, E. Todorov
Learning for Dynamics and Control (**L4DC**), 2020.

[24] *Meta-Learning with Implicit Gradients.*
A. Rajeswaran*, C. Finn*, S. Kakade, S. Levine
Advances in Neural Information Processing Systems (**NeurIPS**), 2019.

[25] *Online Meta-Learning.*
C. Finn*, A. Rajeswaran*, S. Kakade, S. Levine
International Conference on Machine Learning (**ICML**), 2019.

[26] *Plan Online, Learn Offline: Efficient Learning and Exploration via Model-Based Control.*
K. Lowrey*, A. Rajeswaran*, S. Kakade, E. Todorov, I. Mordatch
International Conference on Learning Representations (**ICLR**), 2019.

[27] *Dexterous Manipulation with Deep Reinforcement Learning: Efficient, General, and Low Cost.*
H. Zhu, A. Gupta, A. Rajeswaran, S. Levine, V. Kumar
International Conference on Robotics and Automation (**ICRA**), 2019.

[28] *Reinforcement learning for non-prehensile manipulation: Transfer from simulation to physical system.*
K. Lowrey, S. Kolev, J. Dao, A. Rajeswaran, E. Todorov,
IEEE SIMPAR, 2018 **(Best Paper Award)**

[29] *Variance Reduction for Policy Gradient Using Action-Dependent Factorized Baselines.*
C. Wu, A. Rajeswaran, Y. Duan, V. Kumar, A. Bayen, S. Kakade, I. Mordatch, P. Abbeel
International Conference on Learning Representations (**ICLR**), 2018. **(Full Oral)**

[30] *Divide-and-Conquer Reinforcement Learning.*
D. Ghosh, A. Singh, A. Rajeswaran, V. Kumar, S. Levine
International Conference on Learning Representations (**ICLR**), 2018.

[31] *Learning complex dexterous manipulation with deep reinforcement learning and demonstrations.*
A. Rajeswaran*, V. Kumar*, A. Gupta, G. Vezzani, J. Schulman, E. Todorov, S. Levine
Proceedings of Robotics: Science and Systems (**RSS**), 2018.

[32] *Towards generalization and simplicity in continuous control.*
A. Rajeswaran, K. Lowrey, E. Todorov, S. Kakade
Advances in Neural Information Processing Systems (**NIPS**), 2017.

[33] *EPOpt: Learning robust neural network policies using model ensembles.*
A. Rajeswaran, S. Ghotra, B. Ravindran, S. Levine
International Conference on Learning Representations (**ICLR**), 2017.

[34] *Identifying Topology of Power Distribution Networks Based on Smart Meter Data.*
S. Jayadev, N. Bhatt, R. Pasumarthy, A. Rajeswaran
IEEE Transactions on Smart Grid, 2017.

[35] *A Graph Partitioning Approach for Leak Detection in Water Distribution Networks.*
A. Rajeswaran, S. Narasimhan, S. Narasimhan
Computers & Chemical Engineering, 2017.

Mentoring

Interns & Residents

- Arjun Majumdar (PhD at GeorgiaTech)
- Anurag Ajay (PhD at MIT)
- Philipp Wu (PhD at UC Berkeley)
- Shikhar Bahl (PhD at CMU)
- Nicklas Hansen (PhD at UCSD)
- Mandi Zhao (PhD at Columbia)
- Suraj Nair (PhD at Stanford)
- Allan Zhou (PhD at Stanford)
- Liyiming Ke (PhD at UW Seattle)
- Yuchen Cui (PhD at UT Austin)

University Students

- Gaoyue Zhou (CMU MS → NYU PhD)
- Rafael Rafailov (Stanford MS → Stanford PhD)
- Kevin Lu (UC Berkeley BS → Stanford PhD)
- Catherine Cang (UC Berkeley BS → Plaid)
- Ben Evans (UW BS/MS → NYU PhD)
- Divye Jain (UW BS/MS → Google SWE)
- Sarvjeet Ghotra (IIT-M → MILA PhD)

Professional Service and Teaching

Course Instructor and TA

- Fully designed and **taught** a special topics course at UW on deep RL for robotics. [course website]
- Teaching assistant for advanced graduate level machine learning courses at UW.

Workshops Organized

- Pretraining for Robot Learning (website), CoRL 2022.
- 3rd Offline RL workshop: Offline RL as a "Launchpad" (website), NeurIPS 2022.
- Object Representations for Learning and Reasoning (website), NeurIPS 2020.
- Generative Modeling and Model-Based Reasoning for Robotics and AI (website), ICML 2019.

Reviewing and Program Committee

- NeurIPS (2018, 2019, 2020, 2021, 2022, 2024, 2025)
- ICML (2018, 2019, 2020, 2021, 2023)
- ICLR (2019, 2020, 2021)
- CoRL (2019, 2020, 2021, 2023)