Russell Mendonca

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EDUCATION

Carnegie Mellon University   2020 - 2024
PhD - Robotics Institute

University of California, Berkeley   2016 - 2020
B.S. in Electrical Engineering and Computer Science, Honors

Selected Coursework : Probabalistic Graphical Models, Computer Vision, Convex Optimization, Kinematics Dynamics & Control, Advanced Robotics, Linear Systems Theory, Deep Reinforcement Learning, Machine Learning, Optimal Control

EXPERIENCE

Sr. Robotics Machine Learning Engineer, Tesla Optimus   2024 -
Building new capabilities on optimus humanoid robots using artificial intelligence.

Ph.D. Student, Robotics Institute CMU   2020 - 2024
Advised by Prof. Deepak Pathak
Worked on continually improving robots, including exploration objectives, generalists using prior video, and autonomous mobile-manipulation systems.

Research Intern, Boston Dynamics AI Institute   2023 Summer
Reset-free autonomous reinforcement learning with Spot robots directly in the real world.

Undergraduate Researcher, Berkeley Artificial Intelligence Research   2017 - 2020
Advised by Prof. Sergey Levine
Meta-reinforcement learning algorithms for continuous control.

PUBLICATIONS

Continuously Improving Mobile Manipulation with Autonomous Real-World RL
Russell Mendonca, Emmanuel Panov, Bernadette Bucher, Jiuguang Wang, Deepak Pathak
Conference on Robot Learning (CoRL) 2024

Bimanual Dexterity for Complex Tasks
Kenneth Shaw*, Yulong Li*, Jiahui Yang, Mohan Kumar Srirama, Ray Liu, Haoyu Xiong,
Russell Mendonca[†], Deepak Pathak[†]
Conference on Robot Learning (CoRL) 2024

Adaptive Mobile Manipulation for Articulated Objects in the Open World
Haoyu Xiong, **Russell Mendonca**, Kenneth Shaw, Deepak Pathak
Embodied AI Workshop, CVPR, 2024

Data-Driven Neural Motion Planning
Murtaza Dalal*, Jiahui Yang*, **Russell Mendonca**, Youssef Khaky
Ruslan Salakhutdinov, Deepak Pathak
In Submission ICRA 2024

Video Diffusion Alignment via Reward Gradients
Mihir Prabhudesai*, **Russell Mendonca***, Zheyang Qin*,Katerina Fragkiadaki, Deepak Pathak
In Submission ICLR 2024

Open x-Embodiment: Robotic learning Datasets and RT-X models.
Padalkar, Abhishek, et al.
International Conference on Robotics and Automation (ICRA) 2024, Best Paper

Structured World Models from Human Videos
Russell Mendonca*, Shikhar Bahl*, Deepak Pathak
Robotics Sciences and Systems (RSS) 2023

Efficient RL via Disentangled Environment and Agent Representations
Kevin Gmelin, Shikhar Bahl, **Russell Mendonca**, Deepak Pathak
International Conference on Machine Learning (ICML) 2023, Oral

Vision-Robotics Bridge: Robot Learning from Visual Affordances
Shikhar Bahl*, **Russell Mendonca***, Lili Chen, Unnat Jain, Deepak Pathak
Conference on Computer Vision and Pattern Recognition (CVPR) 2023

Autonomously Exploring Robotic Agents in the Real World
Russell Mendonca, Shikhar Bahl, Deepak Pathak
International Conference on Robotics and Automation (ICRA) 2023

Discovering and Achieving Goals via World Models
Russell Mendonca*, Oleh Rybkin*, Kostas Daniilidis, Danijar Hafner, Deepak Pathak
Neural Information Processing Systems (NeurIPS) 2021
Unsupervised RL & Self-supervised RL workshops at ICML 2021, Oral

Guided Meta-Policy Search
Russell Mendonca, Abhishek Gupta, Rosen Kralev, Pieter Abbeel, Sergey Levine, Chelsea Finn
Neural Information Processing Systems (NeurIPS) 2019, Spotlight talk

Meta Reinforcement Learning of Structured Exploration Strategies
Abhishek Gupta, **Russell Mendonca**, YuXuan Liu, Pieter Abbeel, Sergey Levine
Neural Information Processing Systems (NeurIPS) 2018, Spotlight talk

Meta-Reinforcement Learning Robust to Distributional Shift via
Model Identification and Experience Relabeling
Russell Mendonca*, Xinyang Geng*, Chelsea Finn, Sergey Levine
Inductive biases, invariances and generalization in RL Workshop ICML 2020

Decoupled Meta Learning with Structured Latents
Russell Mendonca, Sergey Levine, Chelsea Finn
Meta-Learning Workshop NeurIPS 2019

HONORS/AWARDS

Finalist, CRA Outstanding Undergraduate Researcher Award	2019
UC Berkeley EECS Honors Degree	2020
UC Berkeley College of Engineering Honors to Date	2016 - 2020

PROFESSIONAL SERVICE

Paper Reviewing :

- Conference on Neural Information Processing Systems (NeurIPS) 2020-24

- International Conference on Machine Learning (ICML) 2021-24

- International Conference on Learning Representations (ICLR) 2021-24

- Conference on Robot Learning (CoRL) 2022-24