UVA | SCHOOL of DATA SCIENCE

Course Wrap-up and Resources

Reinforcement Learning

School of Data Science

University of Virginia

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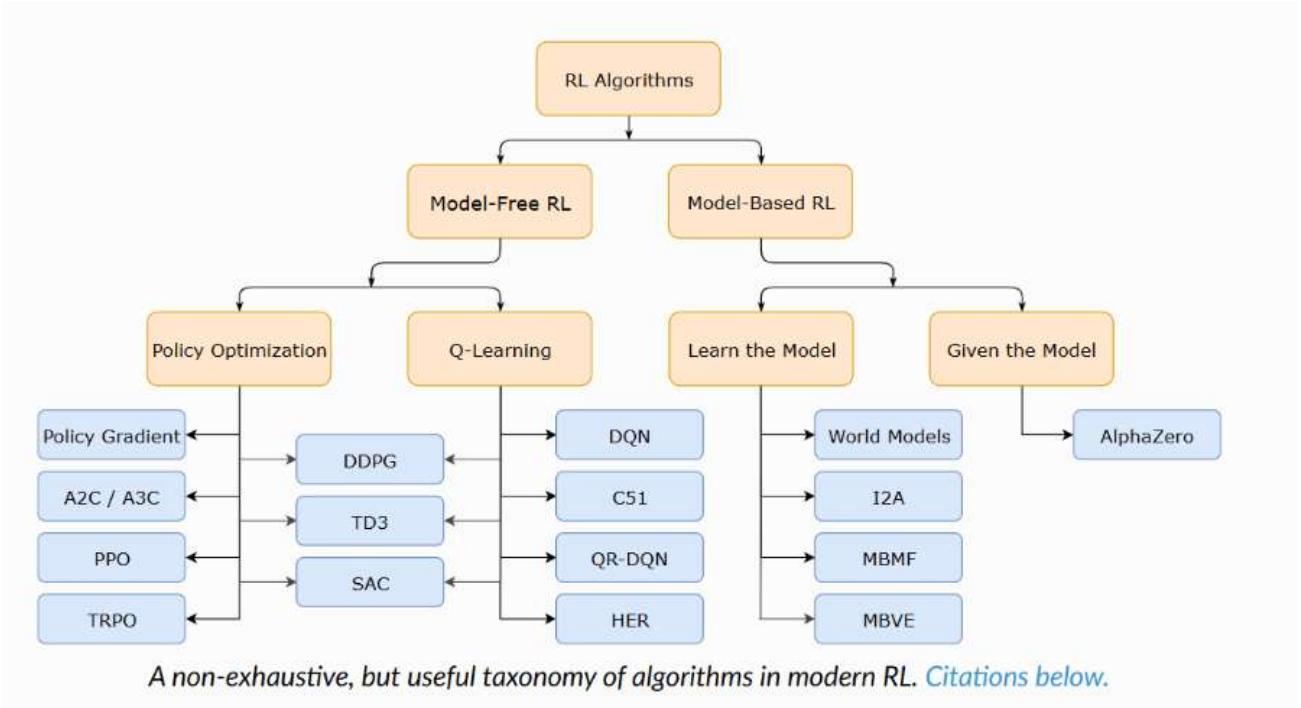
Taxonomy of RL Models

We focused on Model-Free RL



A non-exhaustive, but useful taxonomy of algorithms in modern RL. Citations below.

Source: https://spinningup.openai.com/en/latest/spinningup/rl_intro2.html

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> For continuous action spaces, we used Policy Gradient models

> For discrete action spaces, Q-learning methods can be very sample efficient

A Few Additional Resources

1 | DeepMind Lab - 3D learning environment based on id Software's Quake III Arena via ioquake3 and other open source software.

https://github.com/google-deepmind/lab

2 | Google DeepMind Achieves State-of-the-Art Data-Efficient Reinforcement Learning RL with **Improved Transformer World Models**

https://www.marktechpost.com/2025/02/05/google-deepmind-achieves-state-of-the-art-data-efficient-reinforcement-learning-rl-with-improved-transformer-world-models/