

Energy Management of Hybrid Vehicles Using Artificial Intelligence

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Abstract: *Machine Learning is playing an increasingly important role in the creation of future low-emission vehicles, as traditional engineering methods are reaching their limits. Aside from autonomous driving, current advancements in reinforcement learning can help solve complex parameterization problems. Deep reinforcement learning is used to derive optimal operation strategies for hybrid electric vehicles in this paper. There, a large range of potential driving and traffic scenarios must be foreseen in order to provide fuel efficient solutions, where intelligent and adaptive processes could bring considerable gains. The study behind it shows that a reinforcement learning agent can acquire almost optimal operating strategies without any prior route information, and it opens up a lot of possibilities for including more factors into the optimization process.*

Keywords: Reinforcement, Hybrid Electric Vehicles, Efficient, Machine Learning.

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