# Article information:

Sci-Hub | Reinforcement Learning-Based Optimal Tracking Control of an Unknown Unmanned Surface Vehicle. IEEE Transactions on Neural Networks and Learning Systems, 1–12 | 10.1109/tnnls.2020.3009214  
<https://sci-hub.ru/10.1109/tnnls.2020.3009214>

# Article summary:

1. This article presents a reinforcement learning-based optimal tracking control system for an unknown unmanned surface vehicle (USV).

2. The proposed system uses a deep Q-learning algorithm to learn the optimal control policy for the USV in real time.

3. The results of the experiments show that the proposed system can effectively track a given trajectory with high accuracy and robustness.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides detailed information about the research conducted, including the methodology used, results obtained, and conclusions drawn. The authors also provide evidence to support their claims by citing relevant literature and providing data from experiments conducted using the proposed system. Furthermore, they discuss potential limitations of their work and suggest possible future directions for further research.

However, there are some potential biases in the article that should be noted. For example, while the authors do mention some of the challenges associated with using reinforcement learning for USV control, they do not explore counterarguments or alternative approaches to address these issues. Additionally, while they cite relevant literature to support their claims, they do not present any opposing views or evidence that could challenge their conclusions. Finally, there is no discussion of potential risks associated with using reinforcement learning for USV control or how these risks could be mitigated.

# Topics for further research:

* Reinforcement learning USV control risks
* Alternative approaches to USV control
* Challenges of using reinforcement learning for USV control
* Mitigating risks associated with USV control
* Counterarguments to reinforcement learning for USV control
* Advantages of using reinforcement learning for USV control

# Report location:

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