Computer Networks: Current Advances in Network Softwarization - Literature Survey - Machine Learning and MAC 2

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1 Intended Outcome of the Seminar

The introduction describes the problem, why it is important, the main ideas of the following paper, what are the main contributions of the paper, etc.

2 Suggested Work

- **Deep-Reinforcement Learning Multiple Access for Heterogeneous Wireless Networks - July 2018 [2]**

The paper provides an insights on MAC protocol using the deep-reinforcement learning of Q-learning to accommodate different wireless protocols like TDMA and ALOHA to share a spectrum, using the machine learning strategies.

3 Related Work

- **Human-level control through deep reinforcement learning - Feb 2015 [1]**

This paper provides detailed information regarding the deep-reinforcement learning and its general application in networks.

- **Reinforcement learning based MAC protocol for wireless sensor networks - July 2006**

4 Model description

References

[1] Volodymyr Mnih, Koray Kavukcuoglu, David Silver, Andrei A Rusu, Joel Veness, Marc G Bellemare, Alex Graves, Martin Riedmiller, Andreas K Fidjeland, Georg Ostrovski, et al. Human-level control through deep reinforcement learning. *Nature*, 518(7540):529, 2015.

[2] Yiding Yu, Taotao Wang, and Soung Chang Liew. Deep-reinforcement learning multiple access for heterogeneous wireless networks. *IEEE Journal on Selected Areas in Communications*, 2019.