

Subject: ??????

Topic: AlphaGo - ?????????? Zero????

AlphaGo - é»fâ£«â, 'éi-â'ia...-é-(æ¼"è-) Zeroæœ²é"æ¥µé™•

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Date: 2017â¹¹11æœ¹10æ—¥ 16:45:50

ä¼†è‡i¼š: http://www.pgs2.net/modules/newbb/viewtopic.php?post_id=4832

2017?11?10?16:30 ????? ?? | [??10](#)



?????11?10????????????

???DeepTech???Â ???Â ???



????? Erica ? 2010 ?????????? 19 ?????????????? 8 cores?Zen ?? 6 ? PC???? Many
Faces of GO ?? 12 cores????????????????????????????????Demis Hassabis
?? DeepMind???????? GO Project
?????????????â€”â€”??? Erica????????????????????????????????AlphaGo ??????????????????
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結論

- AlphaGo的成功是深度學習與強化學習
- AlphaGo專案起始至收尾，團結力量大
- 硬體資源與TPU扮演重要角色
- AlphaGo Zero展示了強化學習的巨大
- A.I.在可見的未來將成為人類的工具，

AlphaGo ?????????????????David Silver ???
70~80%?????? David Silver ??? over fitting
?????AlphaGo ?????????? 95%????????? AlphaGo Zero ????????

AlphaGo的最 判斷形勢的價值網路

- David Silver的創見，Arthur Guez
- 強化學習結合深度學習(神經網路)
- 左右互搏的自我學習
- 克服overfitting

開路先鋒總是辛苦的.....

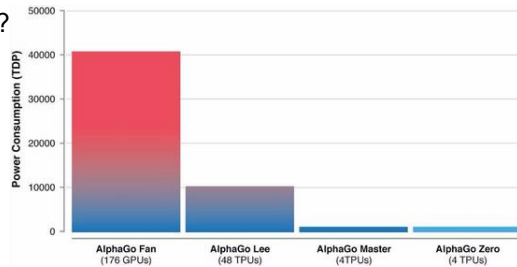
1. AlphaGo Zero 1? AlphaGo Zero
 2? 36 AlphaGo Zero AlphaGo
 v18 AlphaGo Lee 3? 3 AlphaGo Zero ?? AlphaGo v18 ?? 100% ??? 4? ???
 AlphaGo Zero ??? Master ??? Master ??? 60 ??? AlphaGo ??? 5? 40 ??? AlphaGo Zero ??
 Master ??? 90% AlphaGo



DeepMind AlphaGo 20~30
 AlphaGo Deep Learning Reinforcement learning Tree Search

Elo ratings AlphaGo Policy Network Value Network

AlphaGo Fan (176 GPUs) AlphaGo Lee (48 TPUs) AlphaGo Master (4 TPUs) AlphaGo Zero (4 TPUs)



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??AlphaGo Zero ? 3
????? 490 ??? AlphaGo ?????????????????AlphaGo
Zero 21 ????????????????????? AlphaGo Master ????? -End-