============Start Ensemble Strategy============

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======Model training from: 20090000 to 20151002.0

======A2C Training========

Training time (A2C): 1.4178513606389365 minutes

======A2C Validation from: 20151002.0 to 20160104.0

A2C Sharpe Ratio: -1.370217864873562

======PPO Training========

Training time (PPO): 4.529484681288401 minutes

======PPO Validation from: 20151002.0 to 20160104.0

PPO Sharpe Ratio: -inf

======DDPG Training========

Training time (DDPG): 1.0126075267791748 minutes

======DDPG Validation from: 20151002.0 to 20160104.0

======Trading from: 20160104.0 to 20160405.0

previous\_total\_asset:1000000

end\_total\_asset:999452.86

total\_reward:-547.140000000014

total\_cost: 1030.7440000000001

total trades: 24

Sharpe: -0.11517534503937966

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======Model training from: 20090000 to 20160104.0

======A2C Training========

Training time (A2C): 1.2771697402000428 minutes

======A2C Validation from: 20160104.0 to 20160405.0

A2C Sharpe Ratio: -0.5840484404188415

======PPO Training========

Training time (PPO): 5.69232478539149 minutes

======PPO Validation from: 20160104.0 to 20160405.0

PPO Sharpe Ratio: 0.561898597014584

======DDPG Training========

Training time (DDPG): 1.039804712931315 minutes

======DDPG Validation from: 20160104.0 to 20160405.0

======Trading from: 20160405.0 to 20160705.0

previous\_total\_asset:999452.86

end\_total\_asset:980954.5368700523

total\_reward:-18498.323129947647

total\_cost: 998.4509337563476

total trades: 62

Sharpe: -0.28875899379903186

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======Model training from: 20090000 to 20160405.0

======A2C Training========

Training time (A2C): 7.07700027624766 minutes

======A2C Validation from: 20160405.0 to 20160705.0

A2C Sharpe Ratio: -0.28791317068296596

======PPO Training========

Training time (PPO): 2.988400979836782 minutes

======PPO Validation from: 20160405.0 to 20160705.0

PPO Sharpe Ratio: -inf

======DDPG Training========

Training time (DDPG): 1.0479751229286194 minutes

======DDPG Validation from: 20160405.0 to 20160705.0

======Trading from: 20160705.0 to 20161003.0

previous\_total\_asset:980954.5368700523

end\_total\_asset:1015236.7335532089

total\_reward:34282.19668315654

total\_cost: 110.16050422155762

total trades: 62

Sharpe: 0.5802602166835

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======Model training from: 20090000 to 20160705.0

======A2C Training========

Training time (A2C): 1.2521281997362772 minutes

======A2C Validation from: 20160705.0 to 20161003.0

A2C Sharpe Ratio: -0.26672301831916784

======PPO Training========

Training time (PPO): 4.930069677035013 minutes

======PPO Validation from: 20160705.0 to 20161003.0

PPO Sharpe Ratio: -inf

======DDPG Training========

Training time (DDPG): 1.2136576414108275 minutes

======DDPG Validation from: 20160705.0 to 20161003.0

======Trading from: 20161003.0 to 20170103.0

previous\_total\_asset:1015236.7335532089

end\_total\_asset:1009335.9036854345

total\_reward:-5900.829867774388

total\_cost: 2050.7334099610844

total trades: 44

Sharpe: -0.432176179237875

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======Model training from: 20090000 to 20161003.0

======A2C Training========

Training time (A2C): 3.115559188524882 minutes

======A2C Validation from: 20161003.0 to 20170103.0

A2C Sharpe Ratio: -0.7365551503237064

======PPO Training========

Training time (PPO): 4.636964579423268 minutes

======PPO Validation from: 20161003.0 to 20170103.0

PPO Sharpe Ratio: -inf

======DDPG Training========

Training time (DDPG): 1.1592812021573384 minutes

======DDPG Validation from: 20161003.0 to 20170103.0

======Trading from: 20170103.0 to 20170404.0

previous\_total\_asset:1009335.9036854345

end\_total\_asset:1039480.0146947466

total\_reward:30144.111009312095

total\_cost: 1008.3272884907719

total trades: 62

Sharpe: 0.5710961590299503

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======Model training from: 20090000 to 20170103.0

======A2C Training========

Training time (A2C): 1.752501332759857 minutes

======A2C Validation from: 20170103.0 to 20170404.0

A2C Sharpe Ratio: 0.060158366126037956

======PPO Training========

Training time (PPO): 5.594179153442383 minutes

======PPO Validation from: 20170103.0 to 20170404.0

PPO Sharpe Ratio: 0.5750845671309042

======DDPG Training========

Training time (DDPG): 1.2412309924761453 minutes

======DDPG Validation from: 20170103.0 to 20170404.0

======Trading from: 20170404.0 to 20170705.0

previous\_total\_asset:1039480.0146947466

end\_total\_asset:1028178.5596943559

total\_reward:-11301.455000390648

total\_cost: 0.0

total trades: 62

Sharpe: -0.15385577131773145

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======Model training from: 20090000 to 20170404.0

======A2C Training========

Training time (A2C): 1.6892632643381755 minutes

======A2C Validation from: 20170404.0 to 20170705.0

A2C Sharpe Ratio: -0.6843469374567646

======PPO Training========

Training time (PPO): 5.641664572556814 minutes

======PPO Validation from: 20170404.0 to 20170705.0

PPO Sharpe Ratio: -inf

======DDPG Training========

Training time (DDPG): 1.2812851190567016 minutes

======DDPG Validation from: 20170404.0 to 20170705.0

======Trading from: 20170705.0 to 20171003.0

previous\_total\_asset:1028178.5596943559

end\_total\_asset:1021690.6873793169

total\_reward:-6487.872315039043

total\_cost: 0.0

total trades: 62

Sharpe: -0.1651115556214431

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======Model training from: 20090000 to 20170705.0

======A2C Training========

Training time (A2C): 1.9368866840998331 minutes

======A2C Validation from: 20170705.0 to 20171003.0

A2C Sharpe Ratio: -1.2826911062303334

======PPO Training========

Training time (PPO): 5.528773097197215 minutes

======PPO Validation from: 20170705.0 to 20171003.0

PPO Sharpe Ratio: -inf

======DDPG Training========

Training time (DDPG): 1.1413130521774293 minutes

======DDPG Validation from: 20170705.0 to 20171003.0

======Trading from: 20171003.0 to 20180103.0

previous\_total\_asset:1021690.6873793169

end\_total\_asset:982150.5438925005

total\_reward:-39540.143486816436

total\_cost: 0.0

total trades: 62

Sharpe: -0.5646106197602105

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======Model training from: 20090000 to 20171003.0

======A2C Training========

Training time (A2C): 1.5910834789276123 minutes

======A2C Validation from: 20171003.0 to 20180103.0

A2C Sharpe Ratio: -0.5007817216487762

======PPO Training========

Training time (PPO): 5.270027259985606 minutes

======PPO Validation from: 20171003.0 to 20180103.0

PPO Sharpe Ratio: -inf

======DDPG Training========

Training time (DDPG): 1.1121214747428894 minutes

======DDPG Validation from: 20171003.0 to 20180103.0

======Trading from: 20180103.0 to 20180405.0

previous\_total\_asset:982150.5438925005

end\_total\_asset:987823.3266332389

total\_reward:5672.782740738476

total\_cost: 130.04654285517577

total trades: 62

Sharpe: 0.08232546069186143

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======Model training from: 20090000 to 20180103.0

======A2C Training========

Training time (A2C): 1.5196290175120035 minutes

======A2C Validation from: 20180103.0 to 20180405.0

A2C Sharpe Ratio: -0.11047571177184502

======PPO Training========

Training time (PPO): 5.38736553589503 minutes

======PPO Validation from: 20180103.0 to 20180405.0

PPO Sharpe Ratio: -inf

======DDPG Training========

Training time (DDPG): 1.1413353363672891 minutes

======DDPG Validation from: 20180103.0 to 20180405.0

======Trading from: 20180405.0 to 20180705.0

previous\_total\_asset:987823.3266332389

end\_total\_asset:944684.3627353096

total\_reward:-43138.963897929294

total\_cost: 277.408855473291

total trades: 62

Sharpe: -0.4897239008736127

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======Model training from: 20090000 to 20180405.0

======A2C Training========

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027613446F08>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027613446F08>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027614DFFE48>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027614DFFE48>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000276150D3CC8>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000276150D3CC8>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000276110C4E08>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000276110C4E08>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761151FF48>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761151FF48>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027611505B88>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027611505B88>>: AttributeError: module 'gast' has no attribute 'Index'

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WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027611527F88>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027611527F88>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000276115170C8>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000276115170C8>>: AttributeError: module 'gast' has no attribute 'Index'

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WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761151FA88>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761151FA88>>: AttributeError: module 'gast' has no attribute 'Index'

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WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027612F7C708>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027612F7C708>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002761151F608>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002761151F608>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027611527F88>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027611527F88>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619705648>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619705648>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619705648>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619705648>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619705648>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619705648>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027619A298C8>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027619A298C8>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619A21148>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619A21148>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619A21148>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027619A21148>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027612F7CA88>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027612F7CA88>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761264FC08>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761264FC08>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027618070F48>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027618070F48>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027611137708>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027611137708>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761509AF88>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761509AF88>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761504FD88>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761504FD88>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027610D47F48>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027610D47F48>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027610D47388>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027610D47388>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027610D47388>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027610D47388>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761504F888>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x000002761504F888>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027615149608>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027615149608>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027615149608>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027615149608>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002761152F348>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002761152F348>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027617DA3D48>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027617DA3D48>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027614F32AC8>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027614F32AC8>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027614F60DC8>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027614F60DC8>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002760C657848>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002760C657848>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000276111D01C8>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000276111D01C8>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000276152EDB08>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000276152EDB08>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000276152C0CC8>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000276152C0CC8>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027613787948>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x0000027613787948>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027617DA3D48>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x0000027617DA3D48>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000276105AD108>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000276105AD108>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002760C952848>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002760C952848>>: AttributeError: module 'gast' has no attribute 'Index'

WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002760C8C51C8>> could not be transformed and will be executed as-is. Please report this to the AutgoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x000002760C8C51C8>>: AttributeError: module 'gast' has no attribute 'Index'

Training time (A2C): 1.5663442015647888 minutes

======A2C Validation from: 20180405.0 to 20180705.0

A2C Sharpe Ratio: -0.26893998184030693

======PPO Training========

Training time (PPO): 5.453101750214895 minutes

======PPO Validation from: 20180405.0 to 20180705.0

PPO Sharpe Ratio: -inf

======DDPG Training========

Training time (DDPG): 1.2147229711214702 minutes

======DDPG Validation from: 20180405.0 to 20180705.0

======Trading from: 20180705.0 to 20181003.0

previous\_total\_asset:944684.3627353096

end\_total\_asset:941039.8362579894

total\_reward:-3644.526477320236

total\_cost: 2156.966517956884

total trades: 41

Sharpe: -0.1358580888072056

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======Model training from: 20090000 to 20180705.0

======A2C Training========

Training time (A2C): 1.5860746820767722 minutes

======A2C Validation from: 20180705.0 to 20181003.0

A2C Sharpe Ratio: -0.44845466864236105

======PPO Training========

Training time (PPO): 5.791046384970347 minutes

======PPO Validation from: 20180705.0 to 20181003.0

PPO Sharpe Ratio: 0.23489556923564842

======DDPG Training========

Training time (DDPG): 1.3600613951683045 minutes

======DDPG Validation from: 20180705.0 to 20181003.0

======Trading from: 20181003.0 to 20190104.0

previous\_total\_asset:941039.8362579894

end\_total\_asset:986552.5101815895

total\_reward:45512.673923600116

total\_cost: 940.0944764000001

total trades: 62

Sharpe: 0.461942857568065

Ensemble Strategy took: 101.46380226214727 minutes