**READ ME for the 1Simulations folder.**

1ML\_eps: policy-gradient algorithm to learn epsilon in the ε-α-λ model in stable, volatile and adversarial environment.

1ML\_lambda: policy-gradient algorithm to learn lambda in the ε-α-λ model in stable, volatile and adversarial environment.

1ML\_lr: policy-gradient algorithm to learn alpha in the ε-α-λ model in stable, volatile and adversarial environment.

2Constant\_eps: reward and second-order entropy of the ε-α-λ model in stable, volatile and adversarial environment, for different values of epsilon.

2Constant\_lambda: reward and second-order entropy of the ε-α-λ model in stable, volatile and adversarial environment, for different values of lambda.

2Constant\_lr: reward and second-order entropy of the ε-α-λ model in stable, volatile and adversarial environment, for different values of alpha.

2Constant-heatmaps: contains scrips and results from the grid search study

3ML\_adversarials\_eps: policy-gradient to learn epsilon in the ε-α-λ model in 5 different adversarial environments- the human/pigeon environments with 2, 4 and 8 choice-options, the rat environments with 5 choice options and the Hide-and-Seek environment with 8 choice options.

3ML\_adversarials\_lambda: policy-gradient to learn lambda in the ε-α-λ model in 5 different adversarial environments- the human/pigeon environments with 2, 4 and 8 choice-options, the rat environments with 5 choice options and the Hide-and-Seek environment with 8 choice options.

3ML\_adversarials\_lr: policy-gradient to learn alpha in the ε-α-λ model in 5 different adversarial environments- the human/pigeon environments with 2, 4 and 8 choice-options, the rat environments with 5 choice options and the Hide-and-Seek environment with 8 choice options.

For each of these there is a folder and a script. The scripts simulate these situations and save the results in the corresponding folder.

2Constant\_sim\_stats.docx: Statistics on the 2Constant\_x simulations (with x being eps, lambda or lr). In the script, this information is printed in the terminal. The doc contains the copy-paste text.