

Comparasion d'optimisateurs

Paramètres :

- nombre de neurones : 100
- profondeur : 1
- nombre de epoch par default : 1000
- nombre de données : 2
- loss fonction : categorical crossentropy :

$$L_i = - \sum_j \hat{y}_{i,j} \log(y_{i,j})$$

\hat{y} sont les prédictions, y sont les varies valeurs, i désigne le point de données et j désigne la classe.

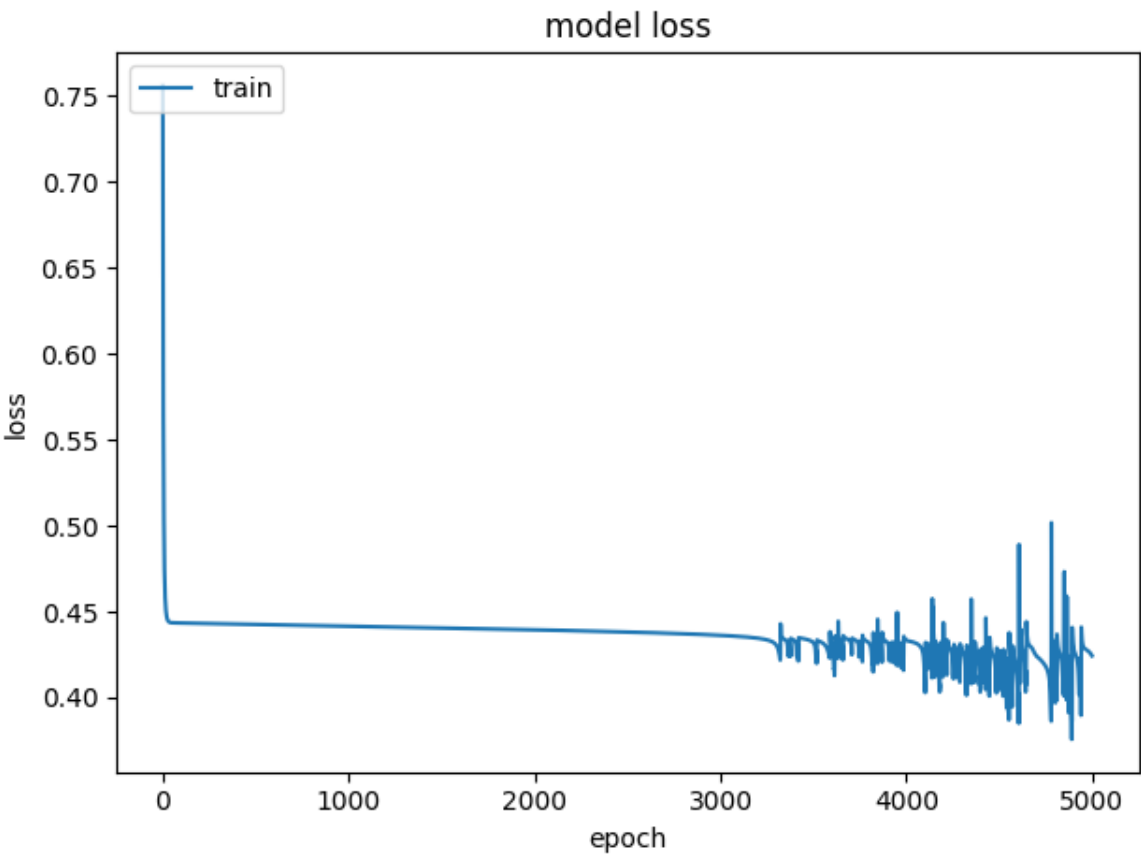
Définition :

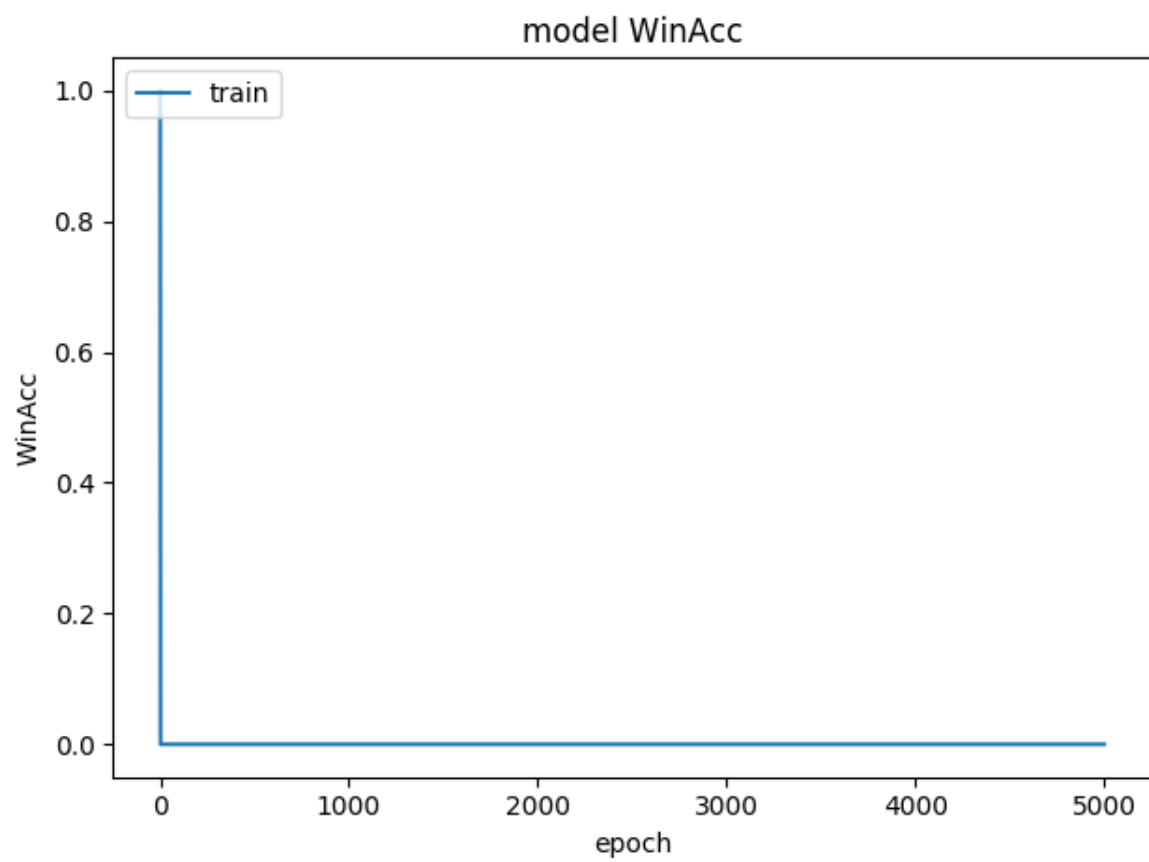
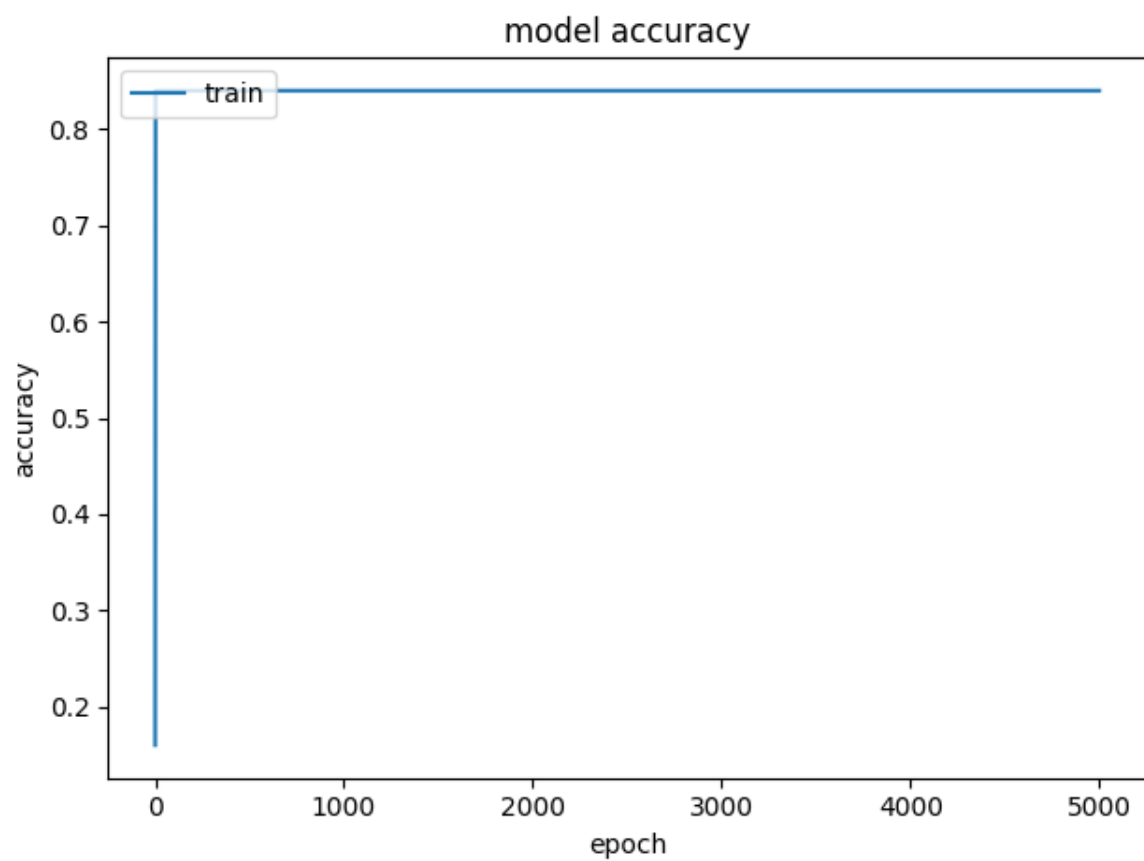
- sgd : Stochastic gradient descent optimizer.
- rmsprop : rmsprop optimizer. Cet optimiseur est généralement un bon choix pour les réseaux de neurones récurrents.
- adam : Cet algorithme est un moyen de calculer le taux d'apprentissage adaptatif pour chaque paramètre.
- Ctime: Completion time
- loss : Denière valeur de loss fonction
- acc : précision finale
- winAcc: précision finale pour la fenêtre
- outWinAcc : précision finale pour hors de la fenêtre

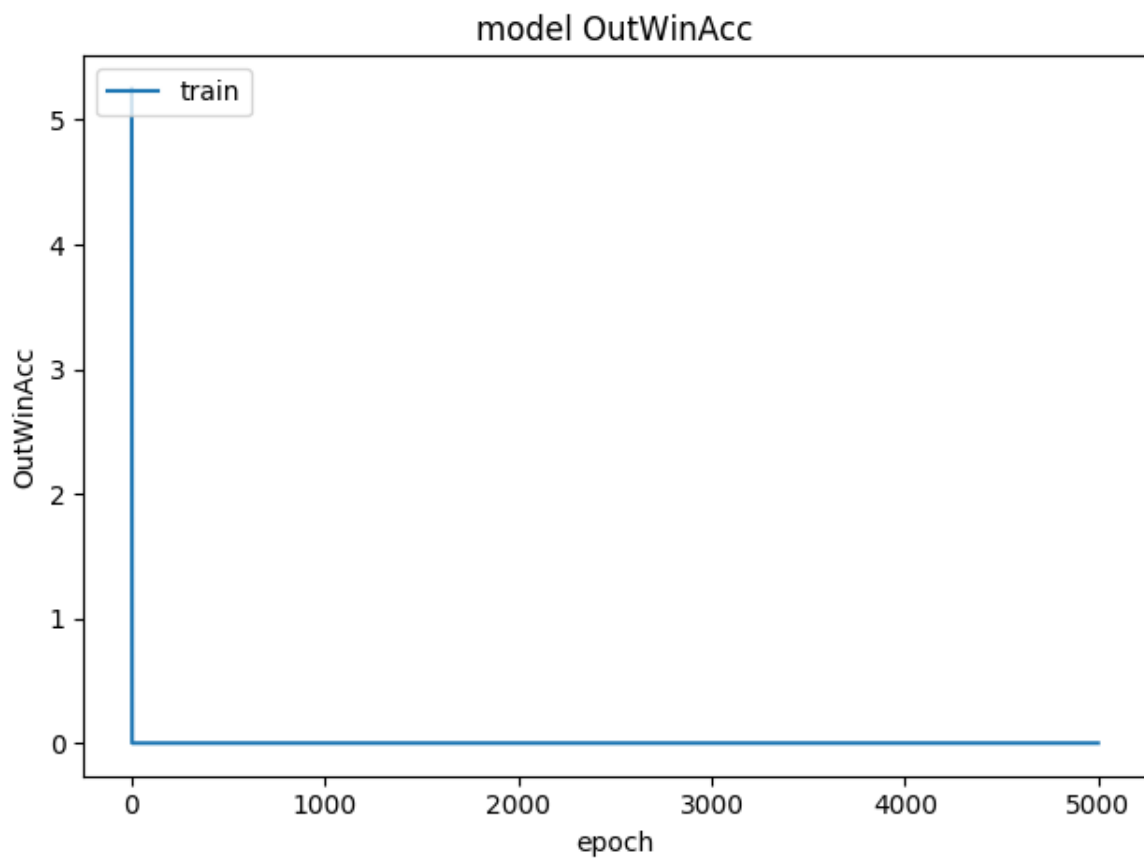
	sgd	rmsprop	adam normale	adam avec L2
Avec Ctime	loss=0.4314 acc=0.8400 winAcc=0 outWinAcc=0 epoch = 5000	loss= 0.1874 acc= 0.8900 winAcc=0.6562 outWinAcc=0.3438	loss=0.1706 acc= 0.8900 winAcc=0.6875 outWinAcc=0.3750	loss=0.1858 acc= 0.8900 winAcc=0.5312 outWinAcc=0.2188
Sans Ctime	loss= 0.4243 acc=0.8400 winAcc=0 outWinAcc=0 epoch = 5000	loss=0.1875 acc=0.9100 winAcc=0.7188 outWinAcc=0.2812	loss= 0.1818 acc= 0.9150 winAcc=0.8125 outWinAcc=0.3438 epoch = 2000	loss= 0.0044 acc= 1.0000 winAcc=1.0000 outWinAcc=0 epoch = 2000

	adam avec L2(epoch = 2000)
Avec Ctime	loss=0.1599 acc=0.8900 winAcc=0.7188 outWinAcc=0.4062

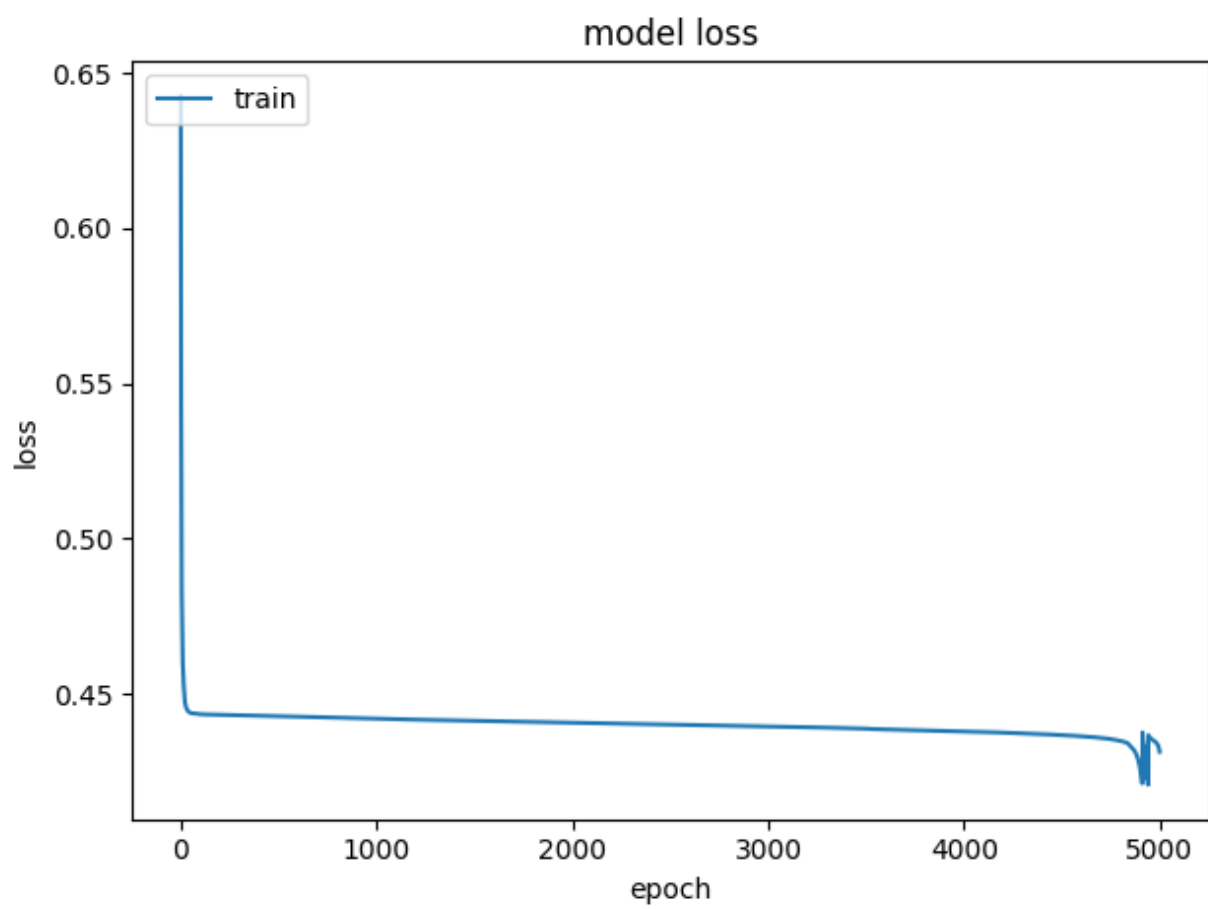
1. sgd - sans Ctime

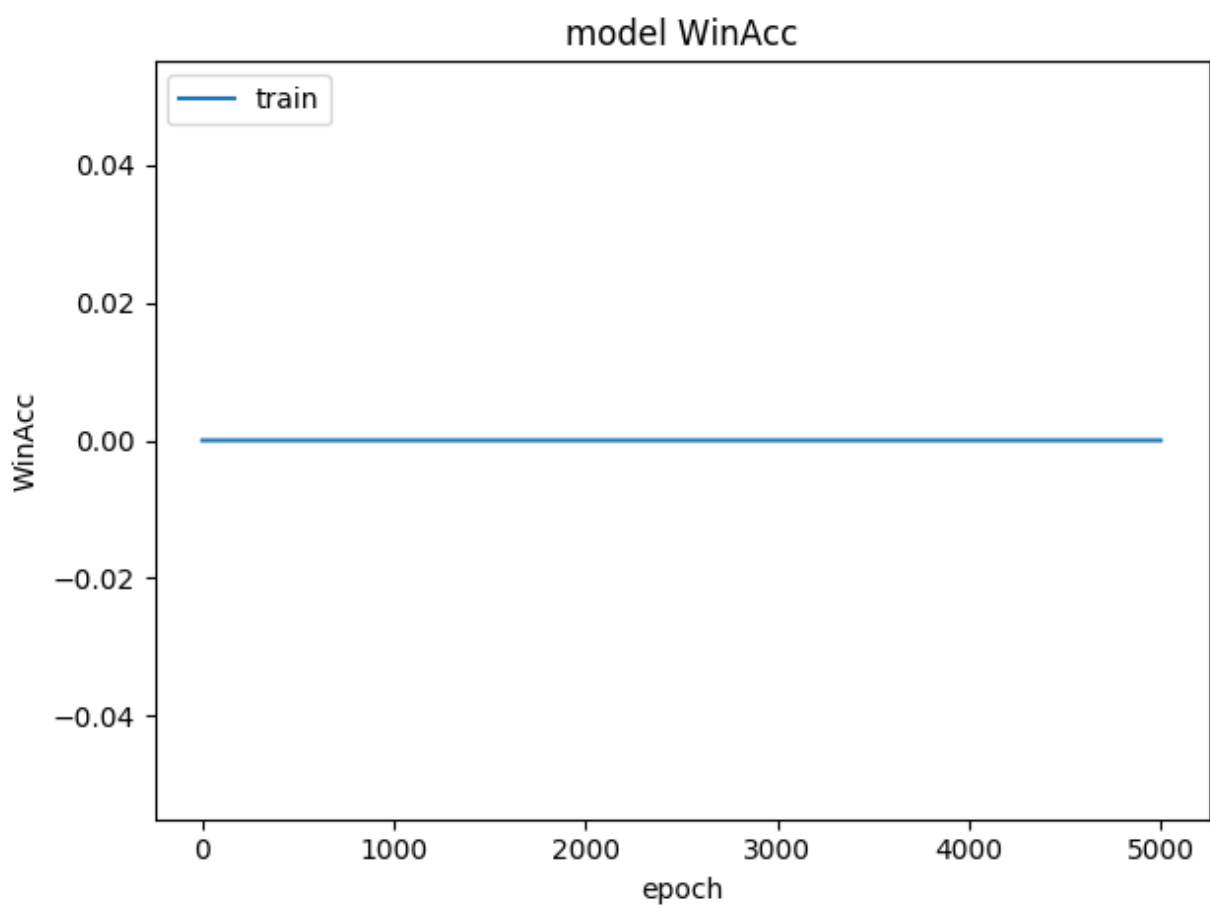
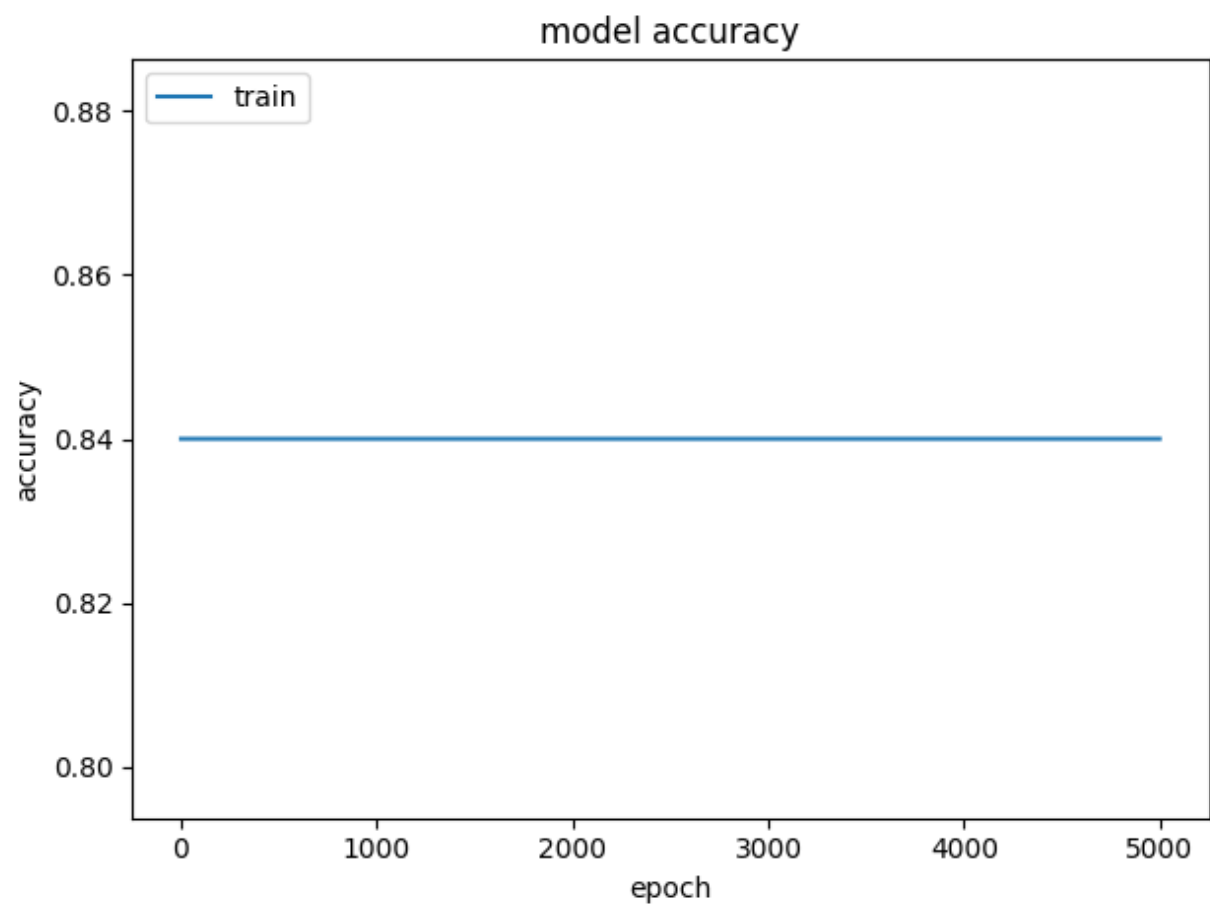


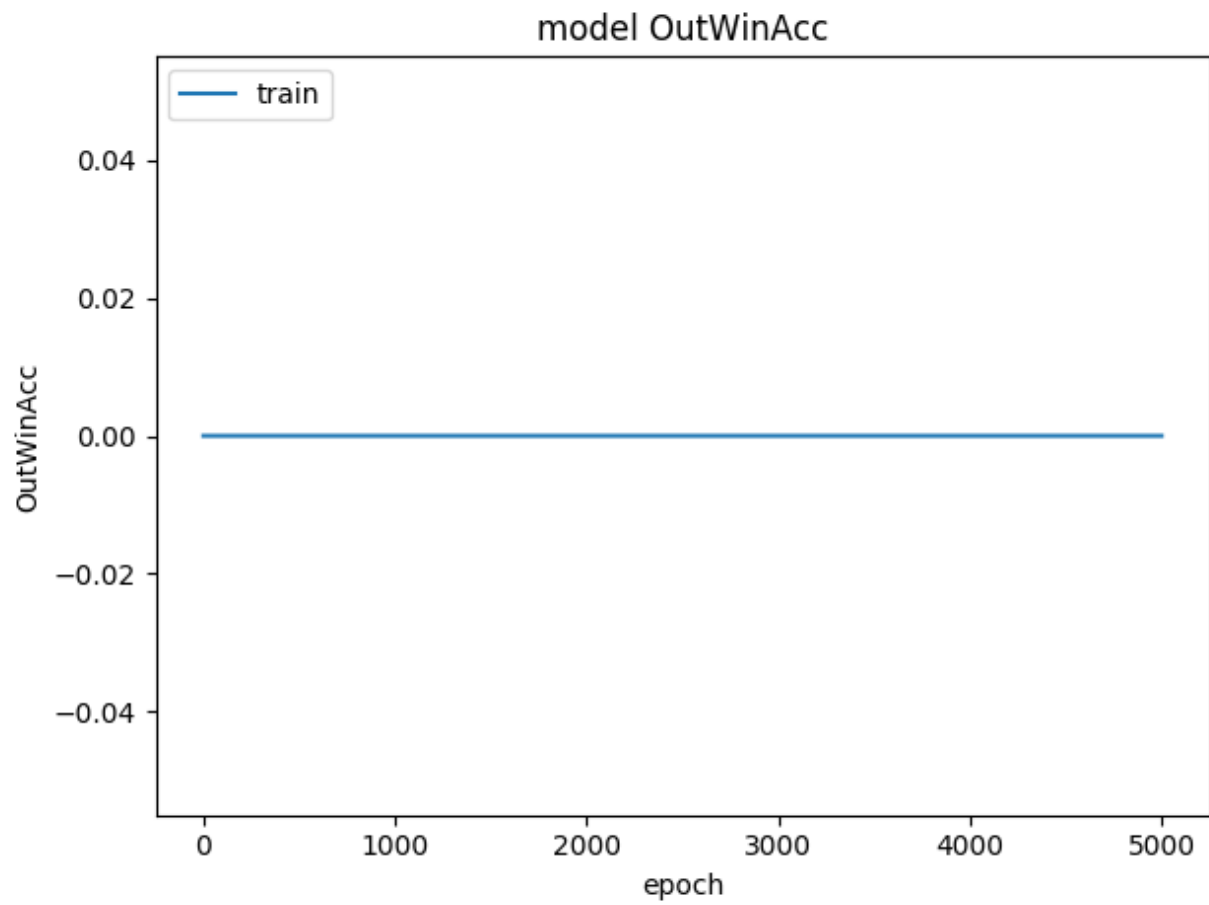




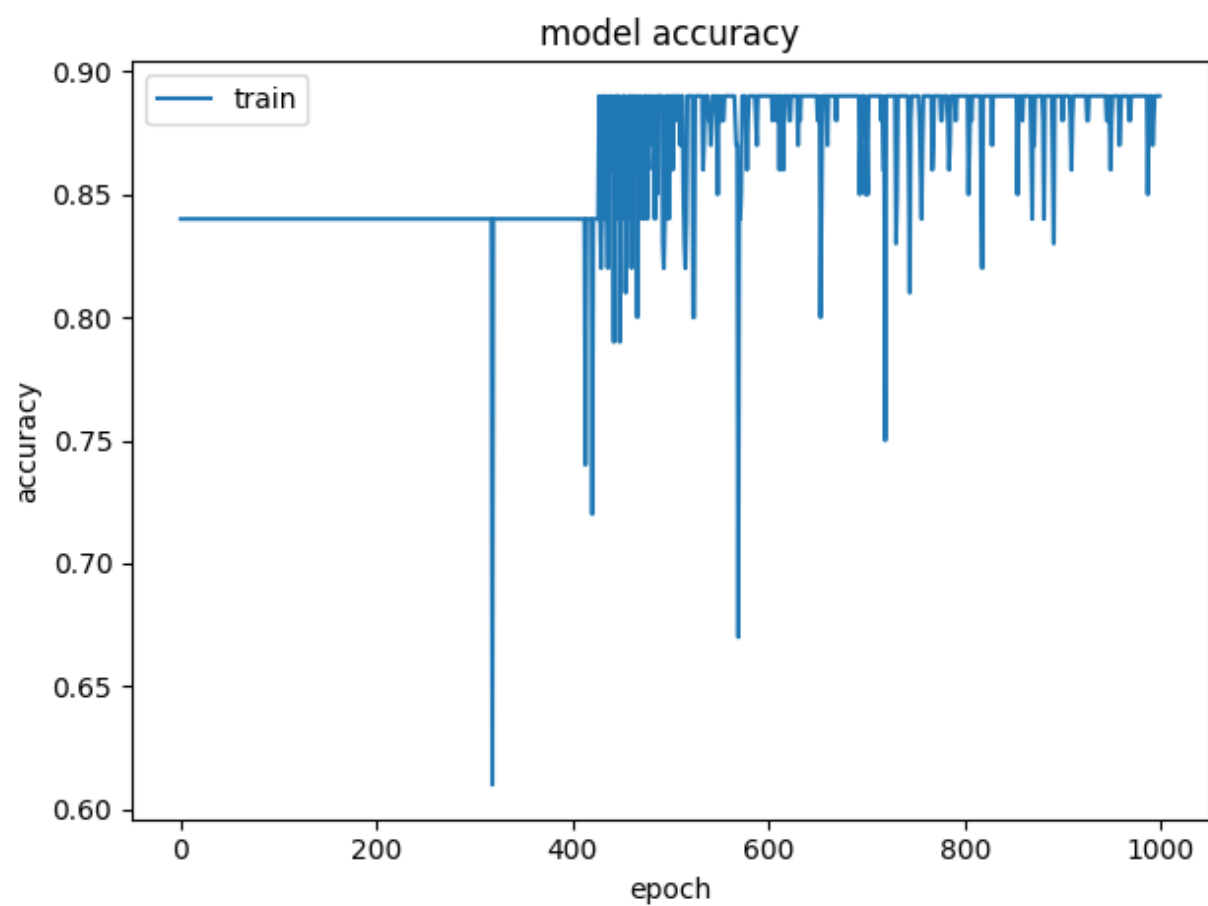
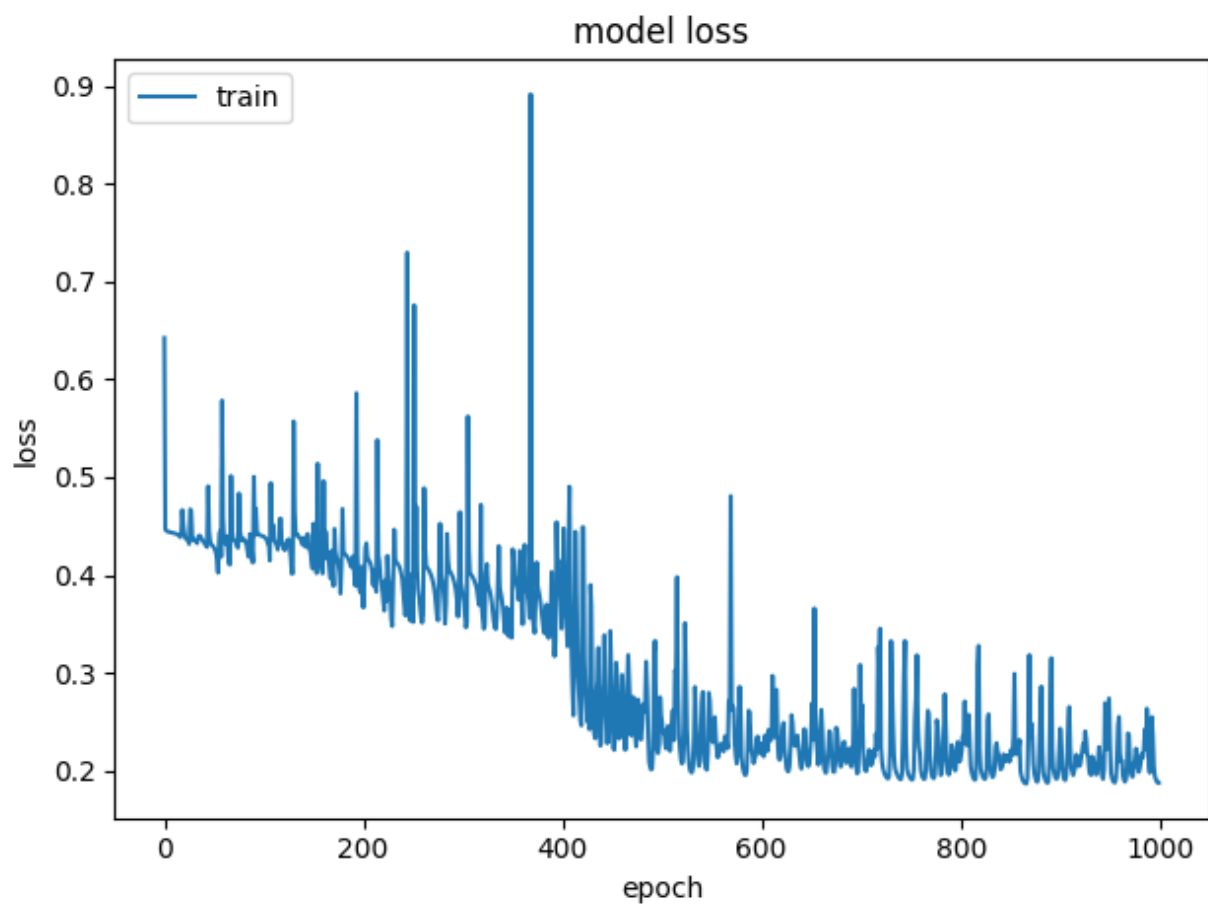
2. sgd - avec Ctime

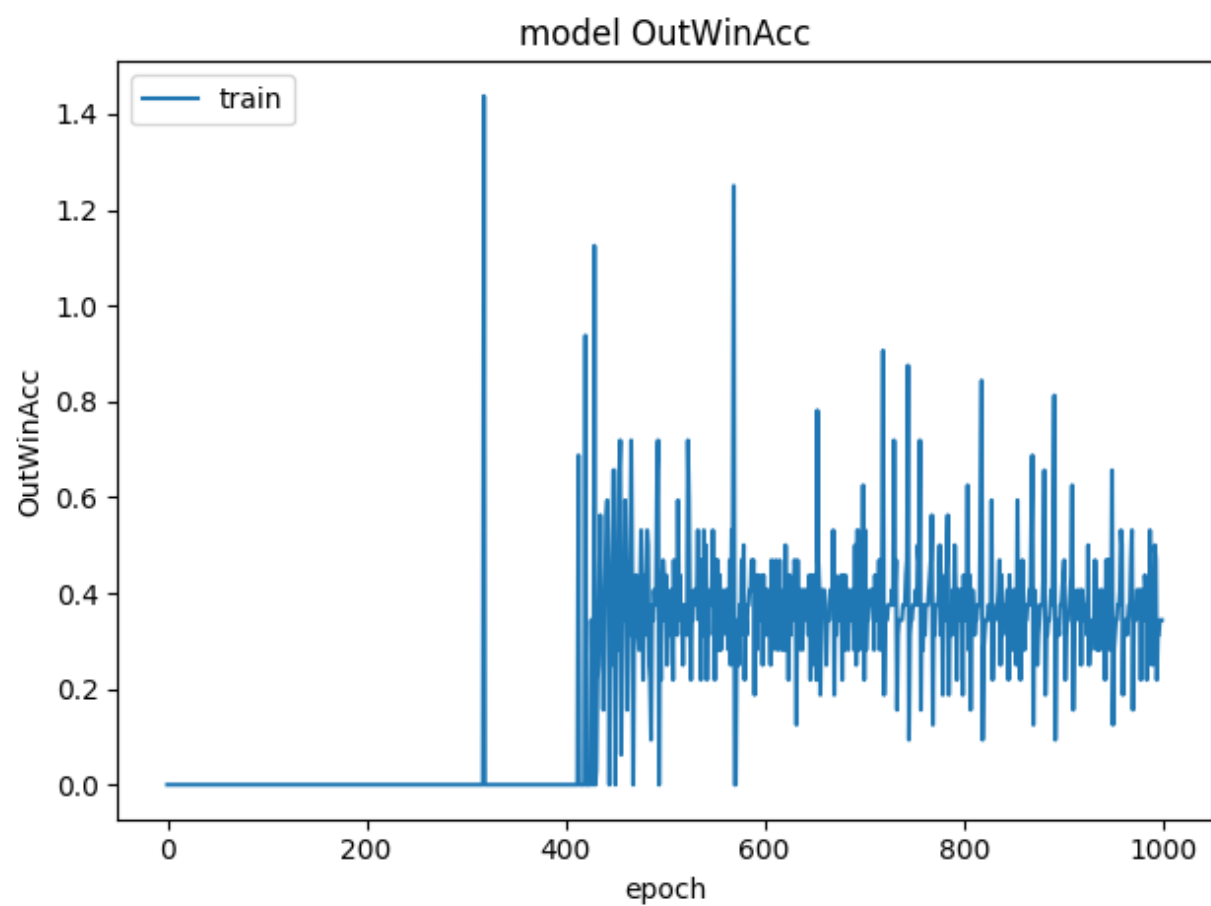
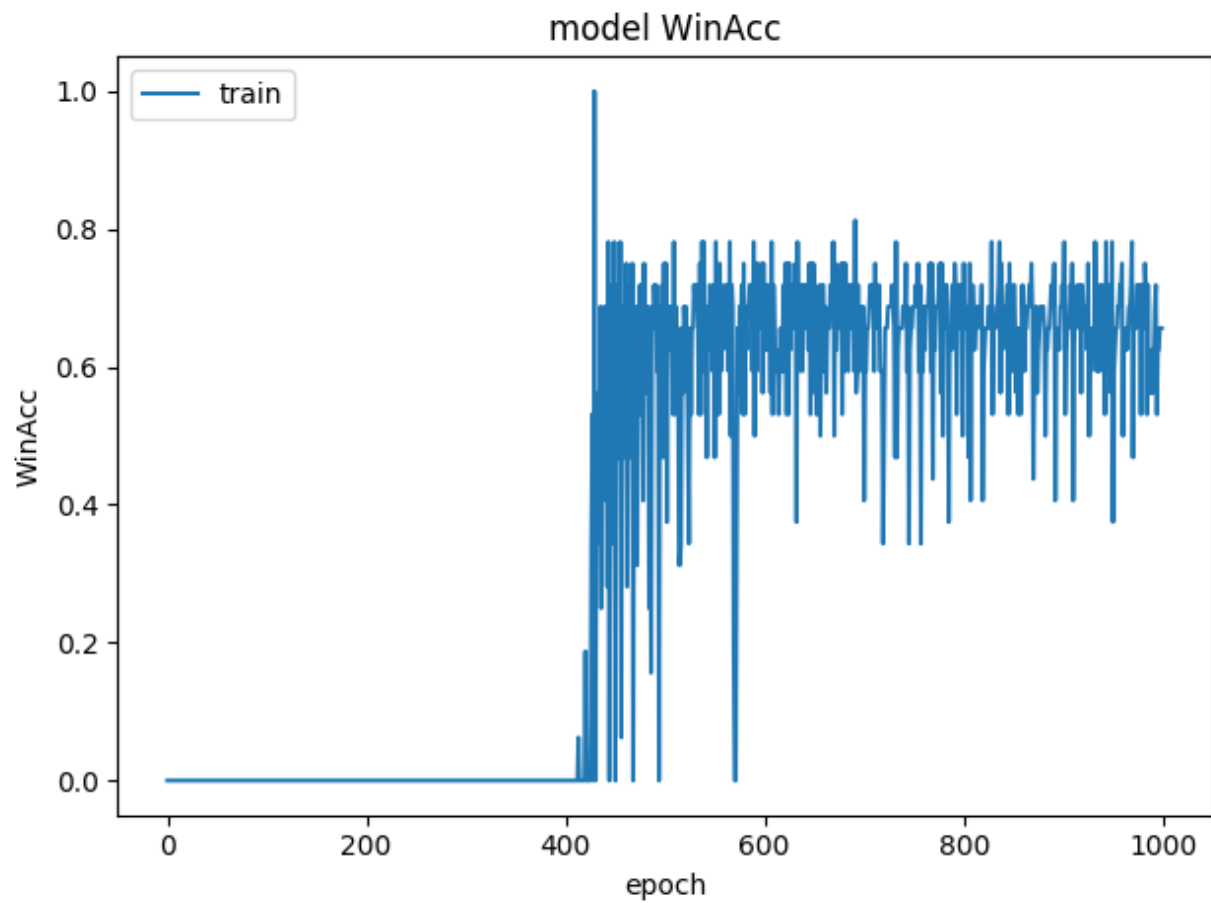




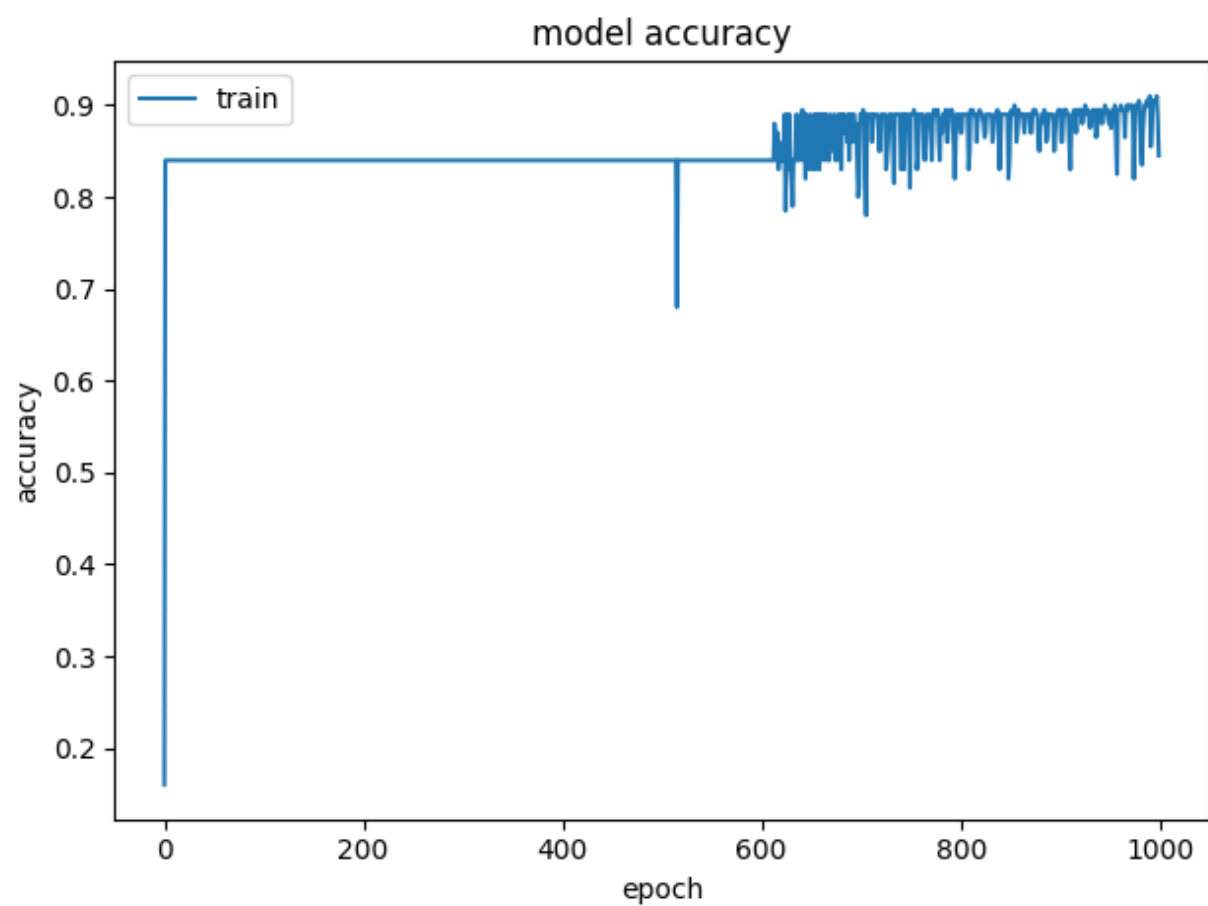
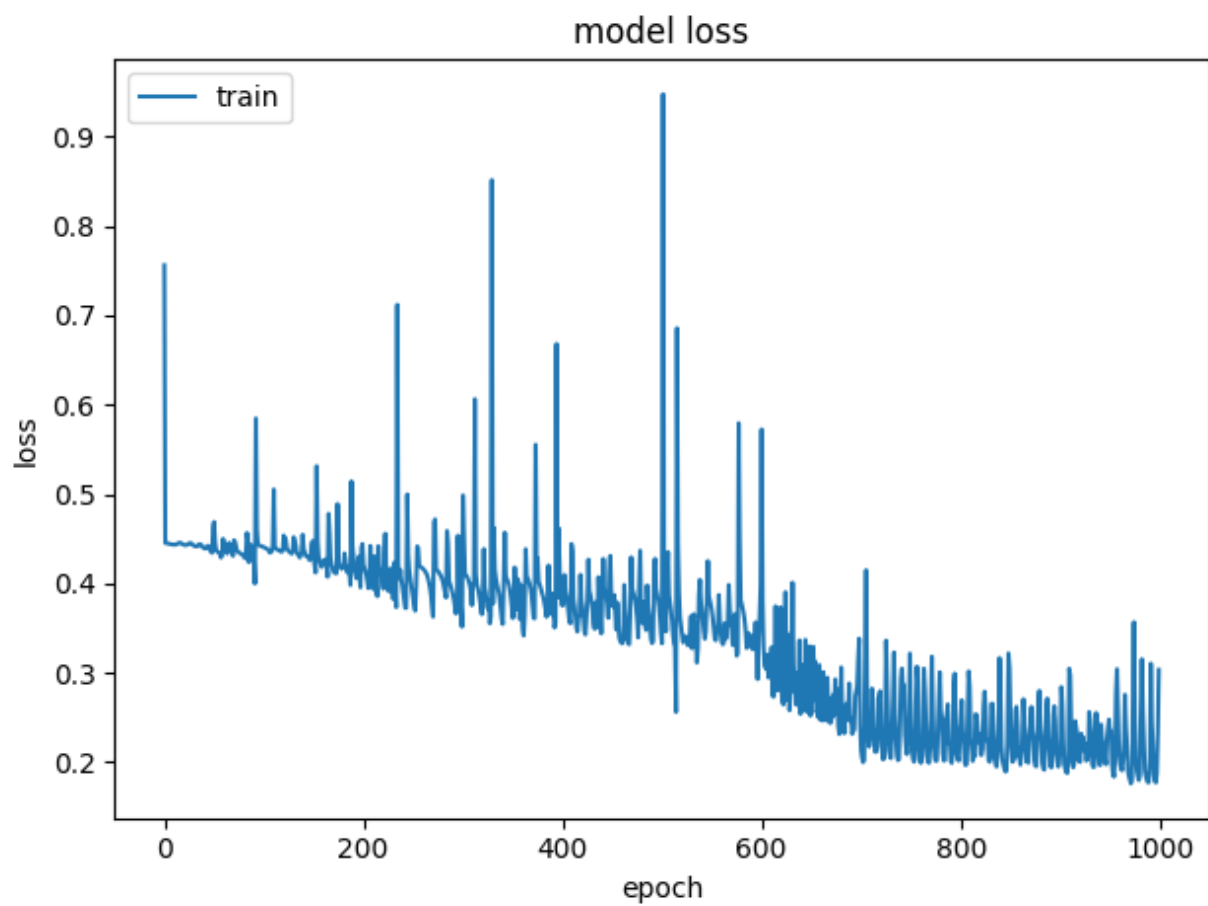


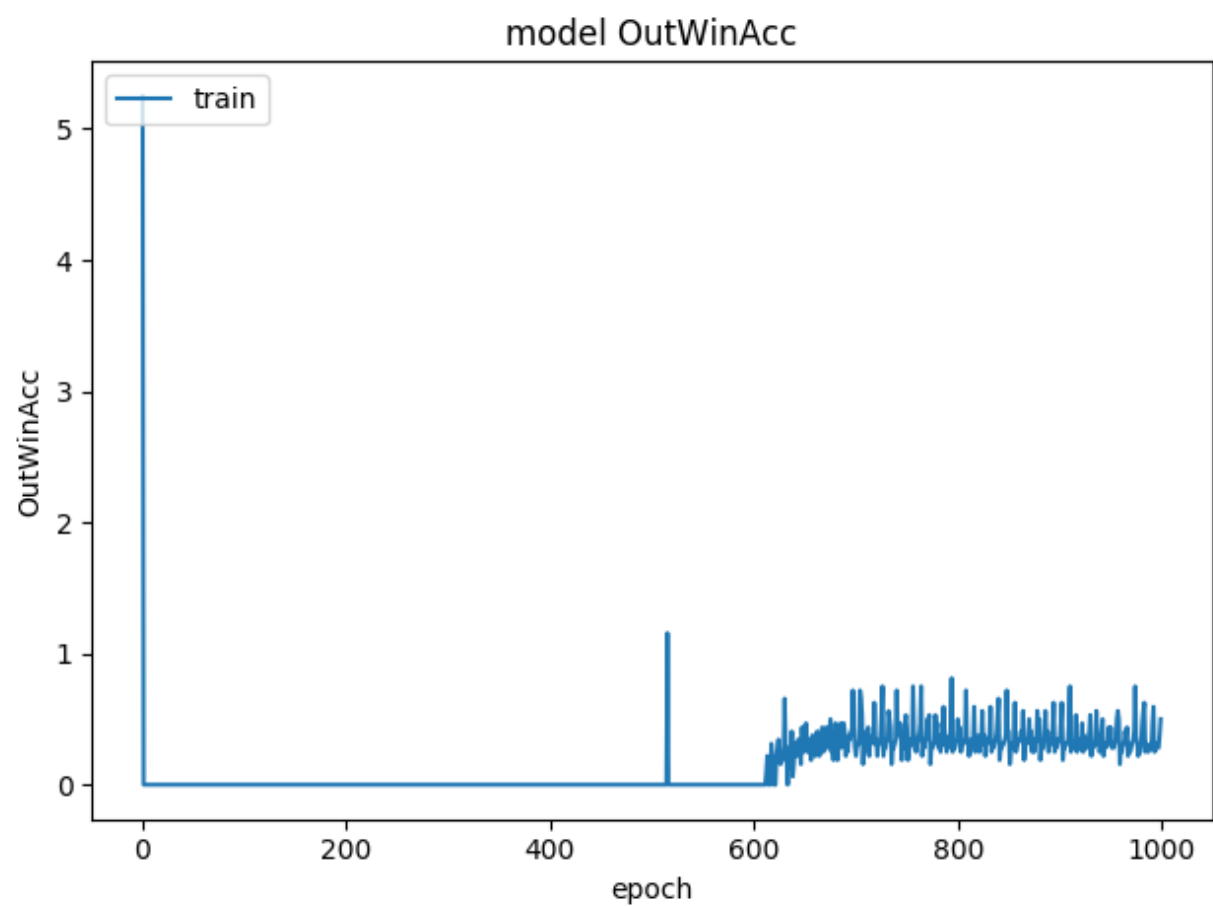
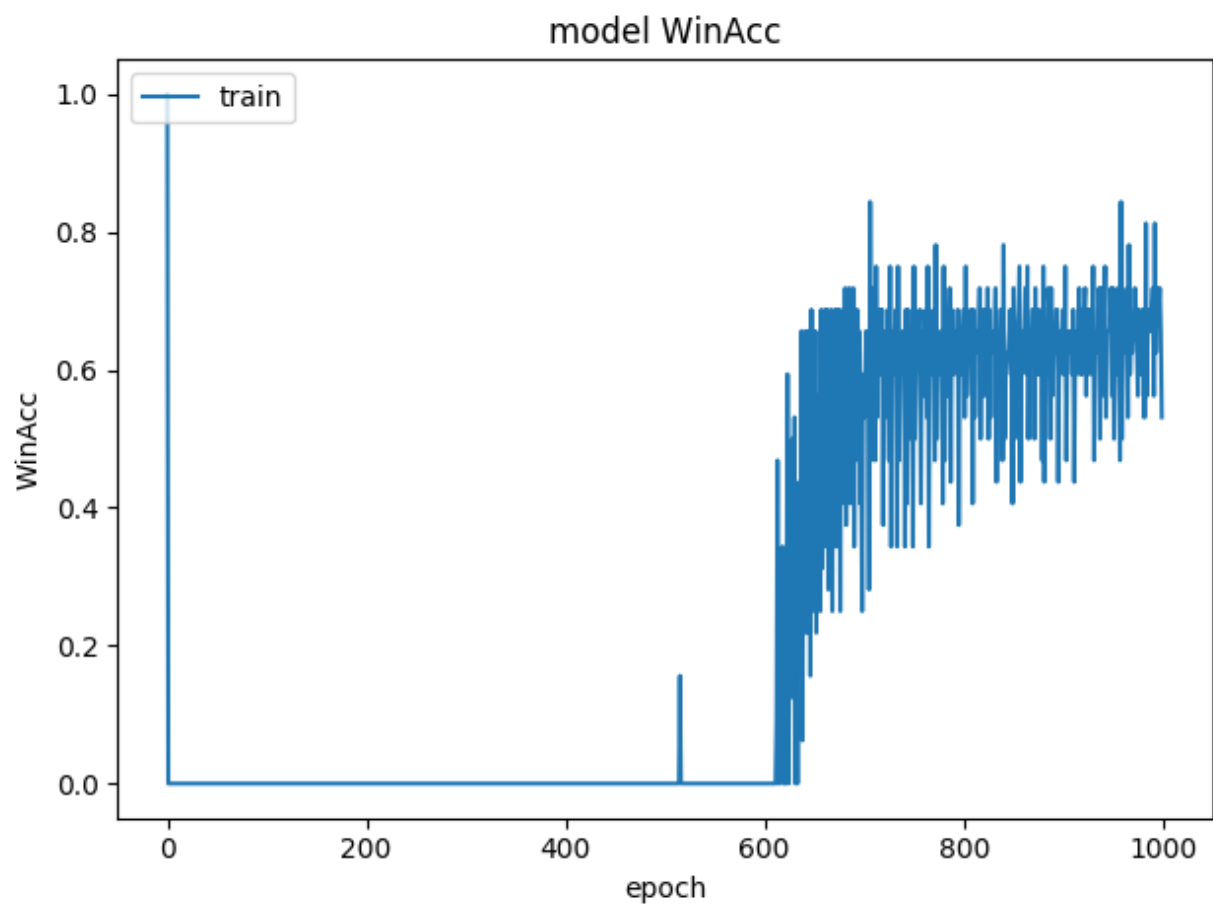
3. rmsprop -avec Ctime



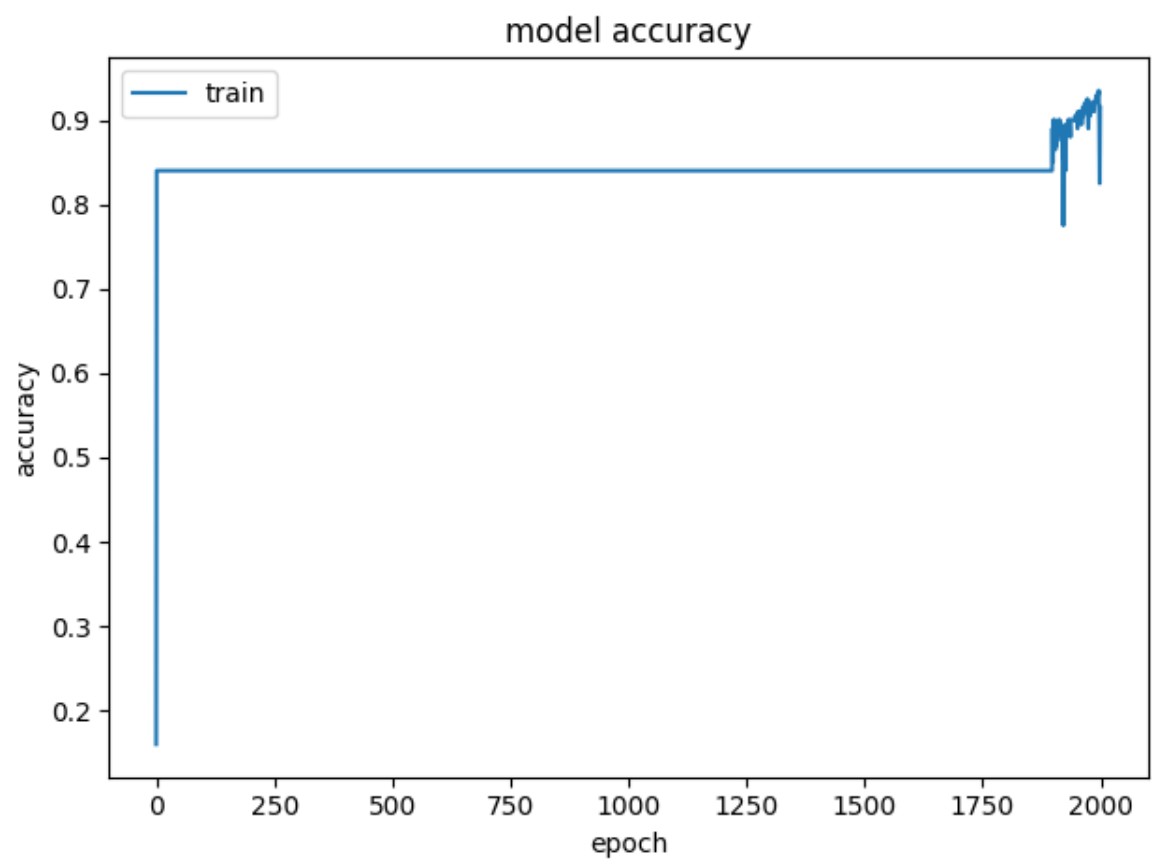
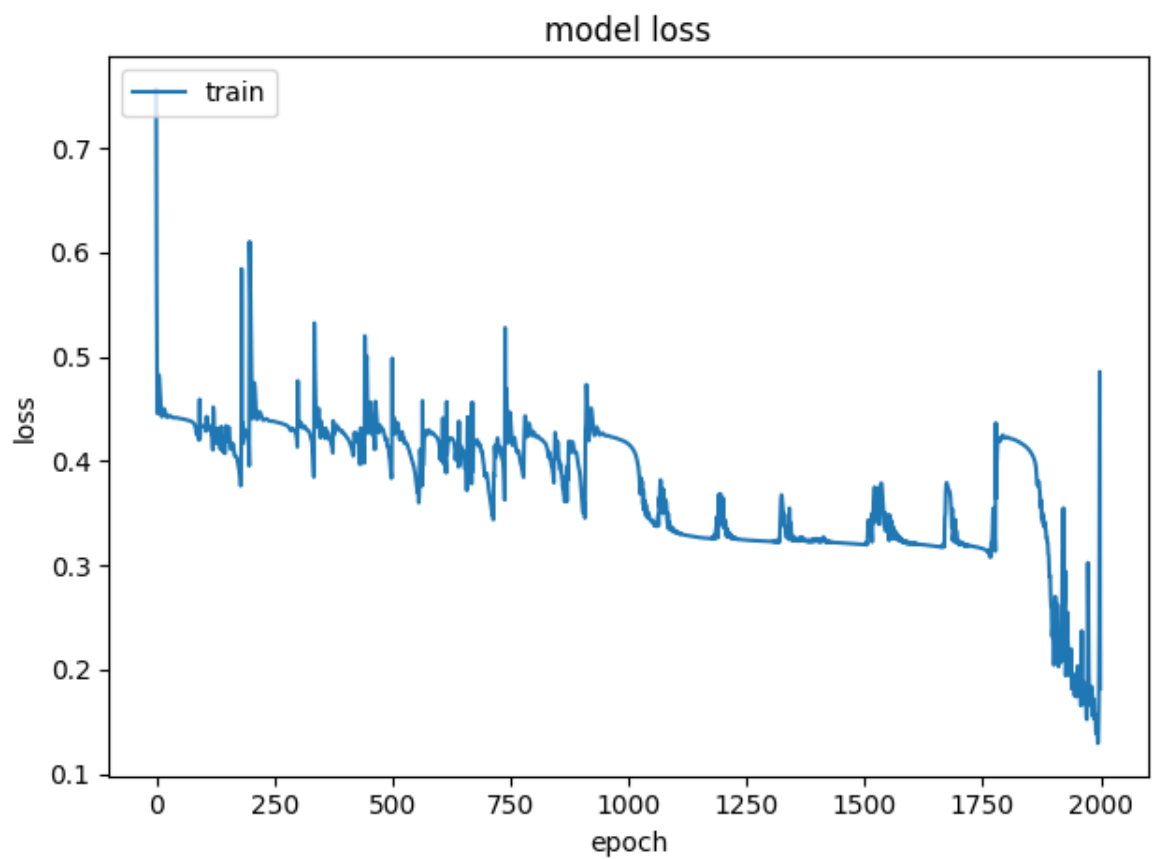


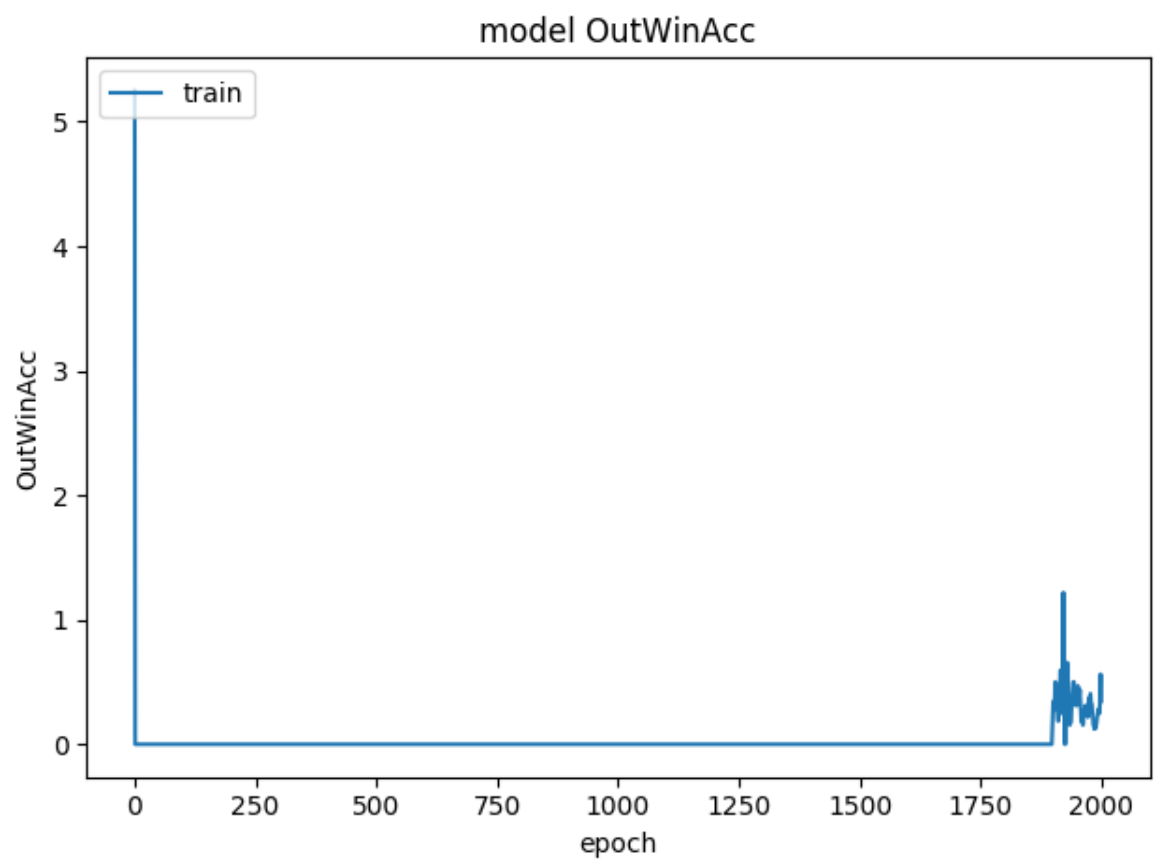
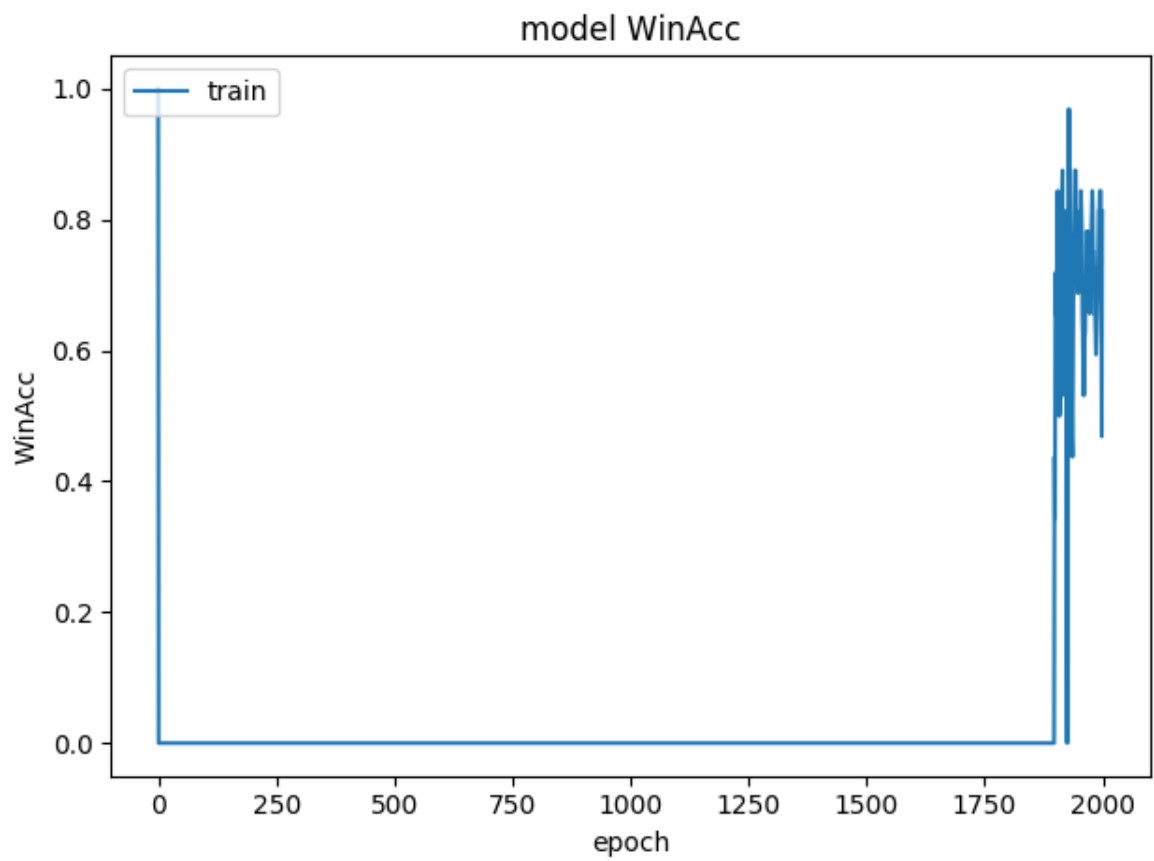
4. rmsprop - sans Ctime



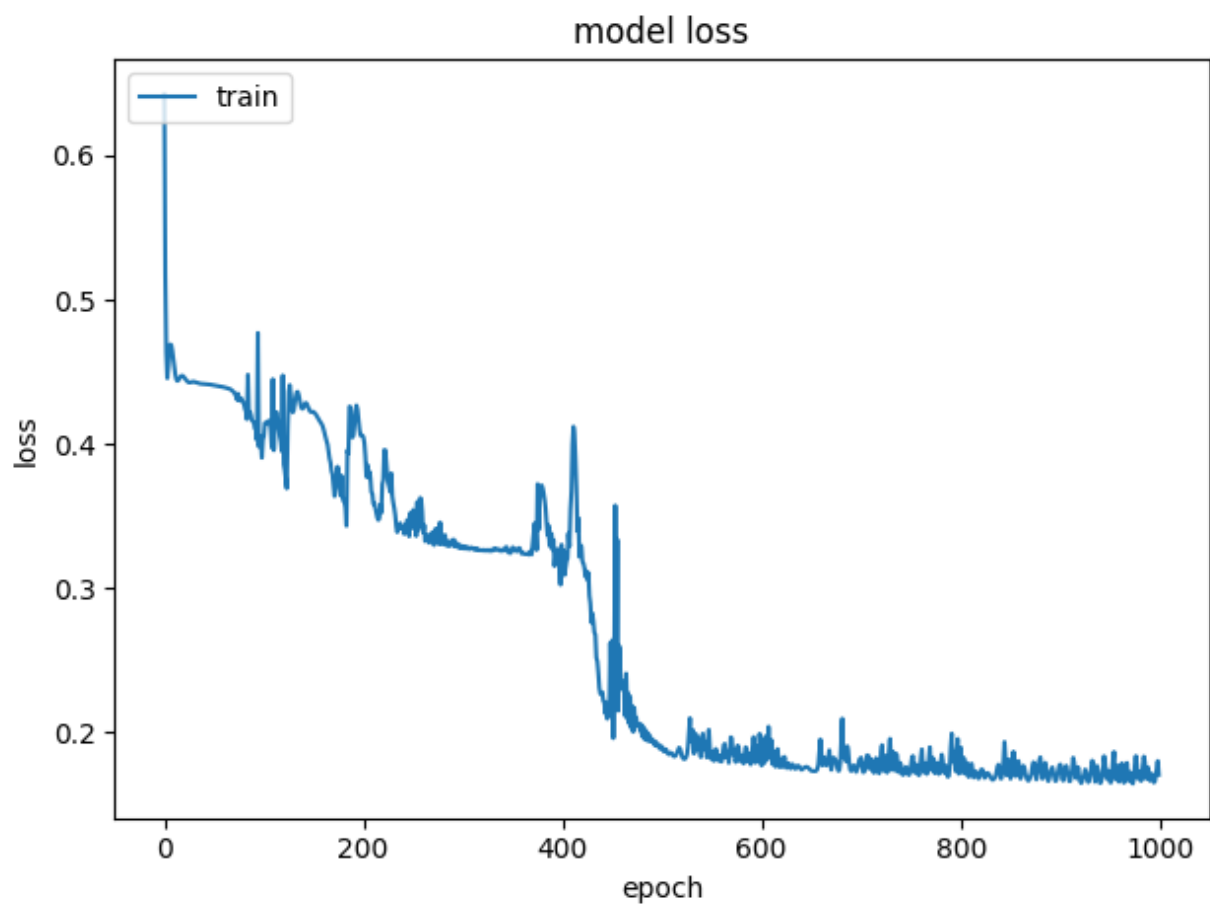


5. adam - sans Ctime

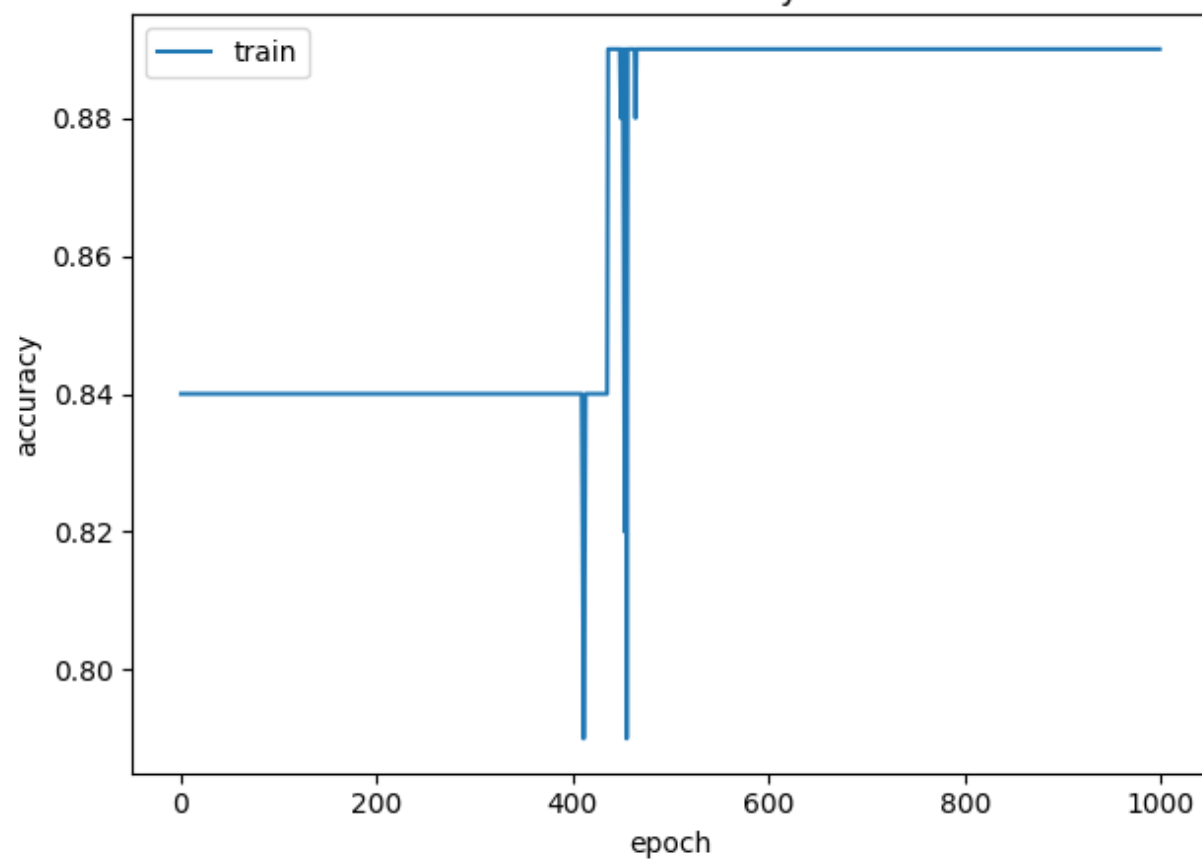


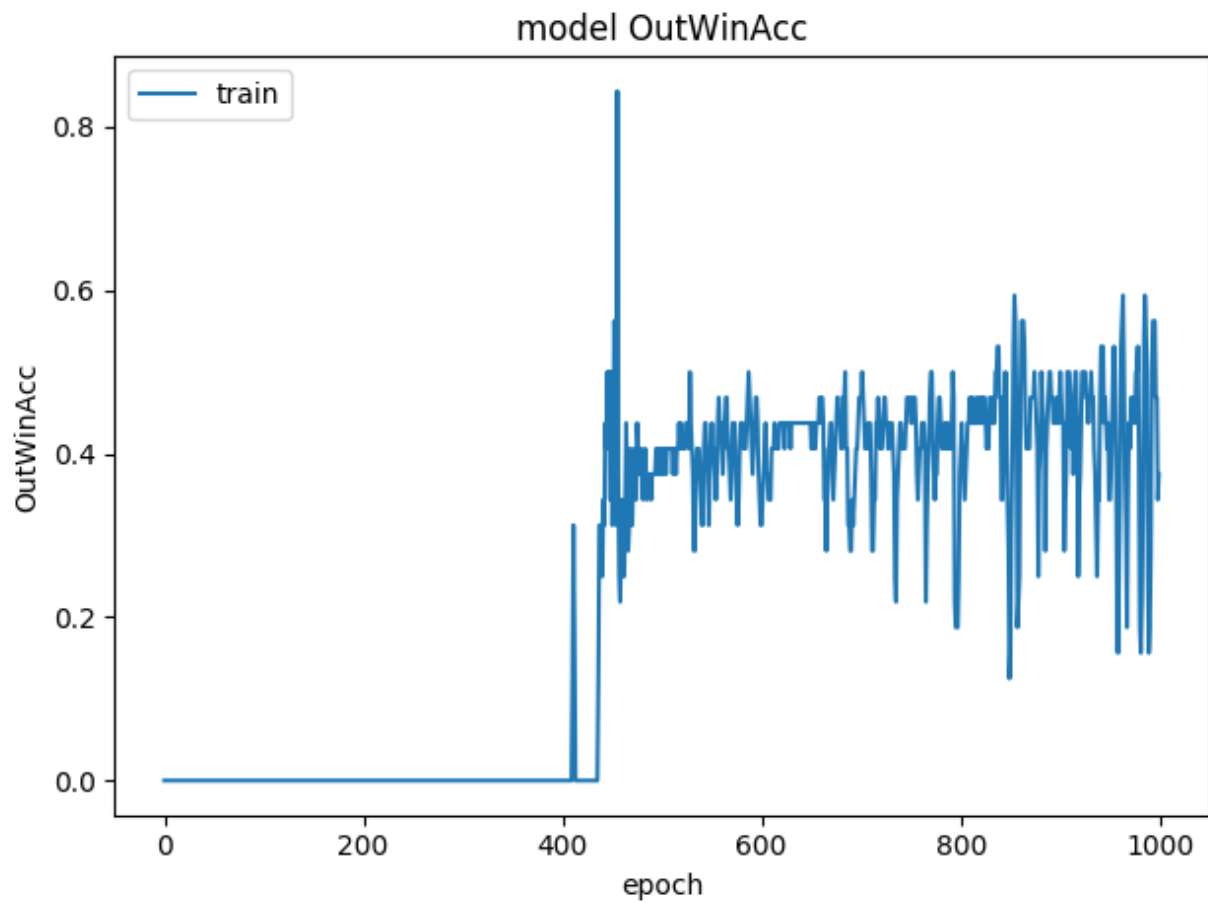


6. adam - avec Ctime

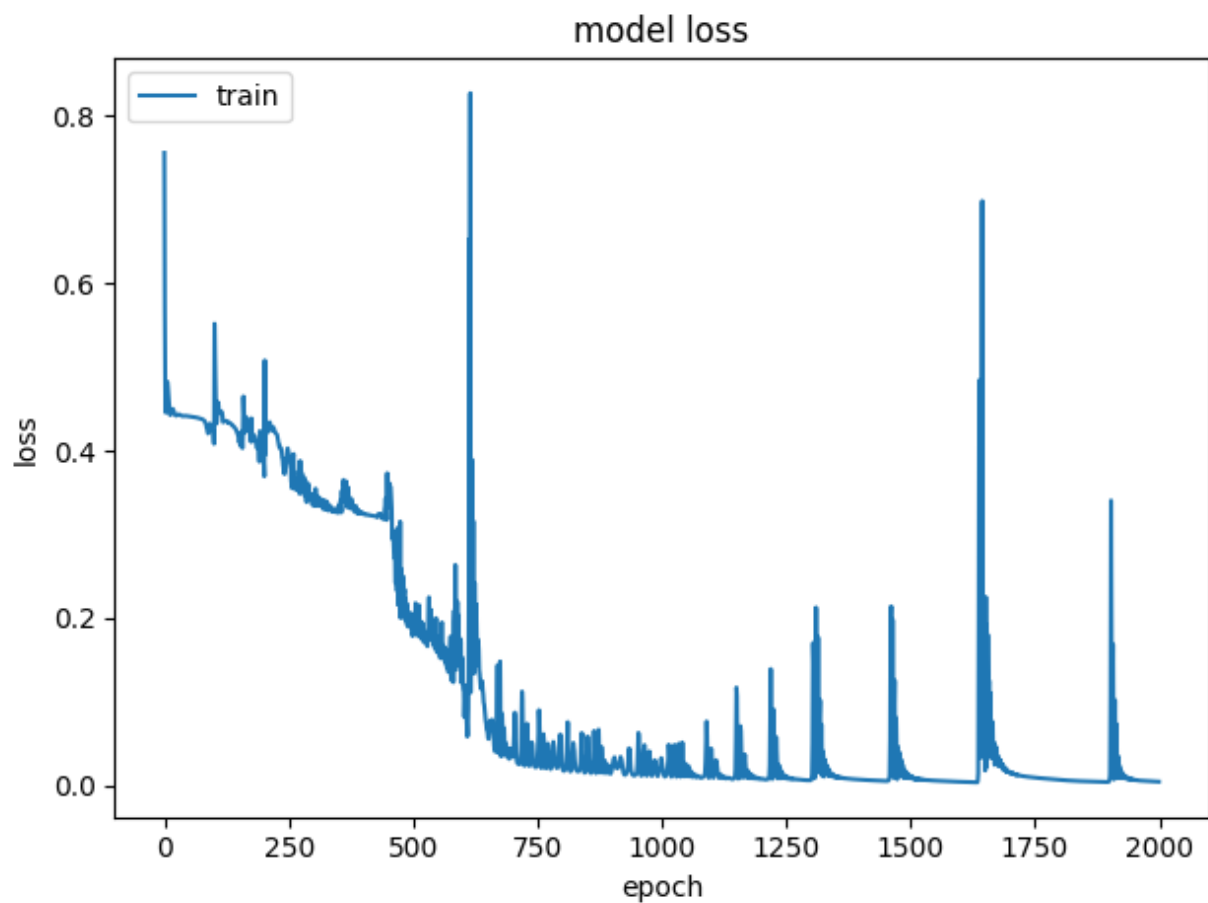


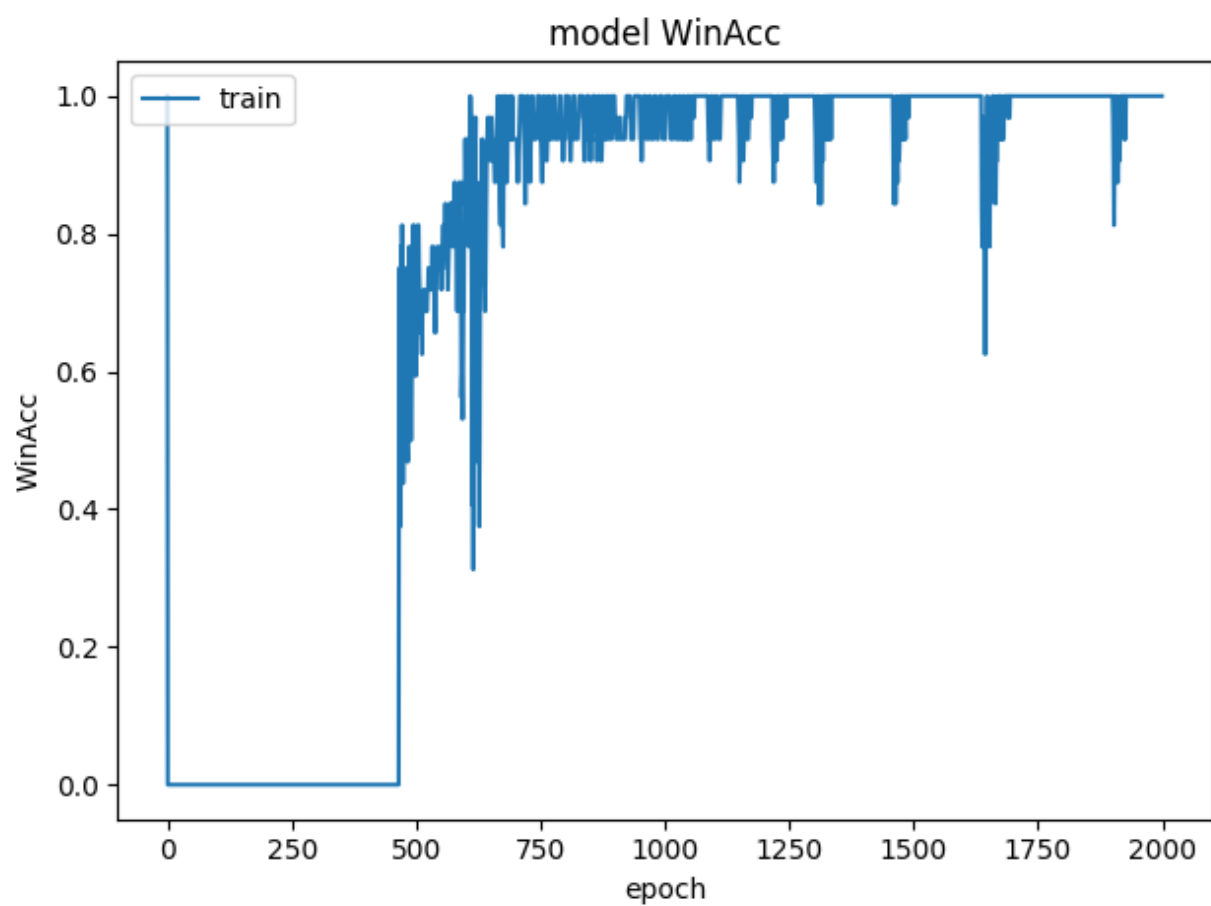
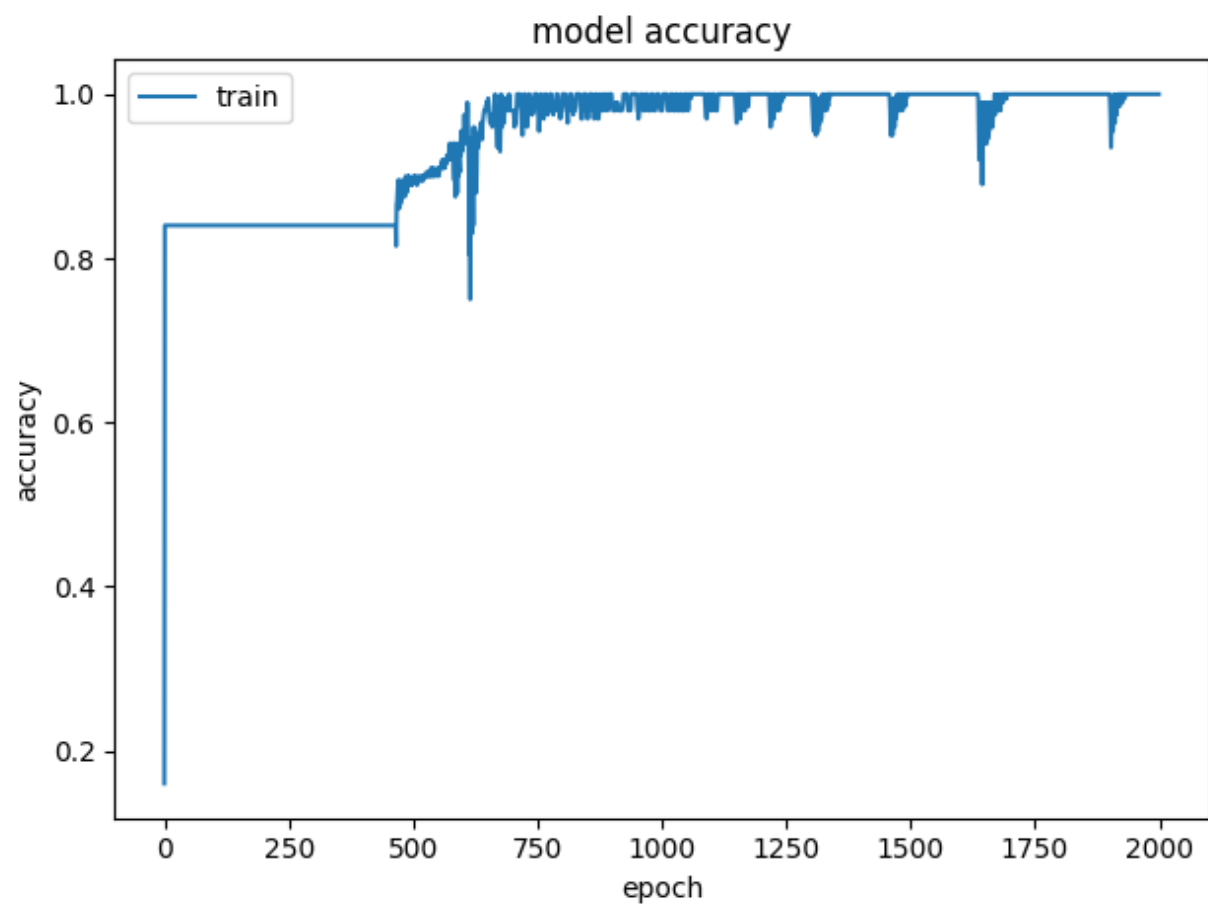
model accuracy

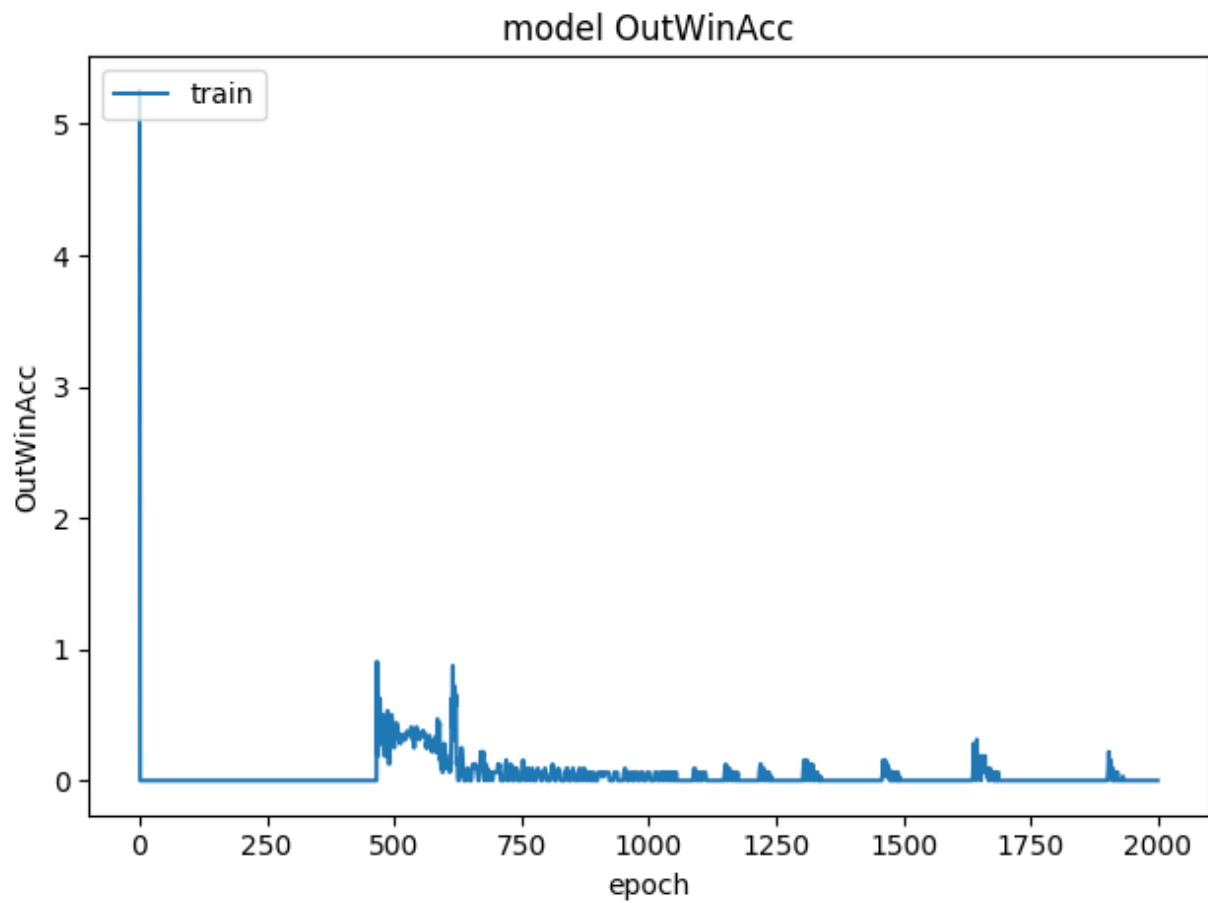




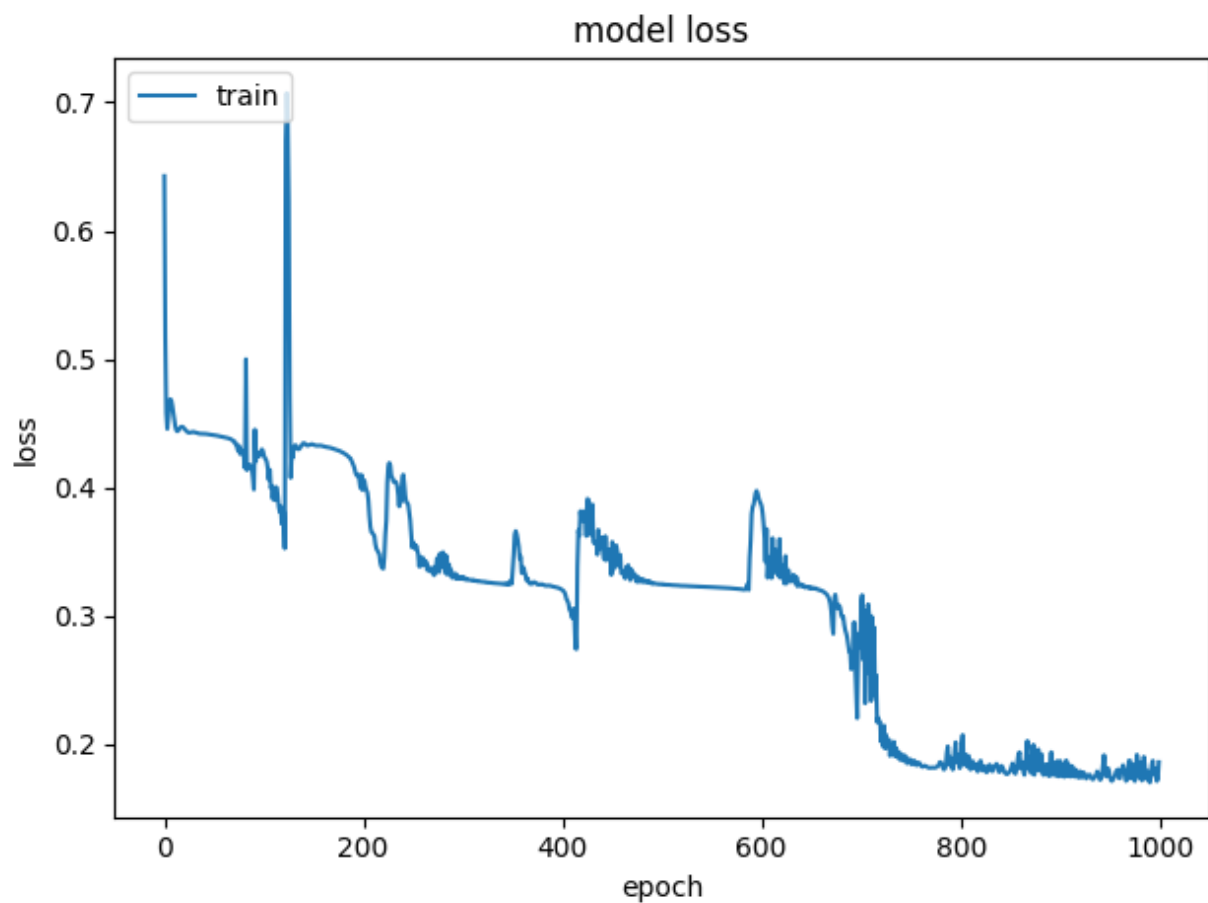
7. adam - sans Ctime et avec L2 (decay = 1e-6)

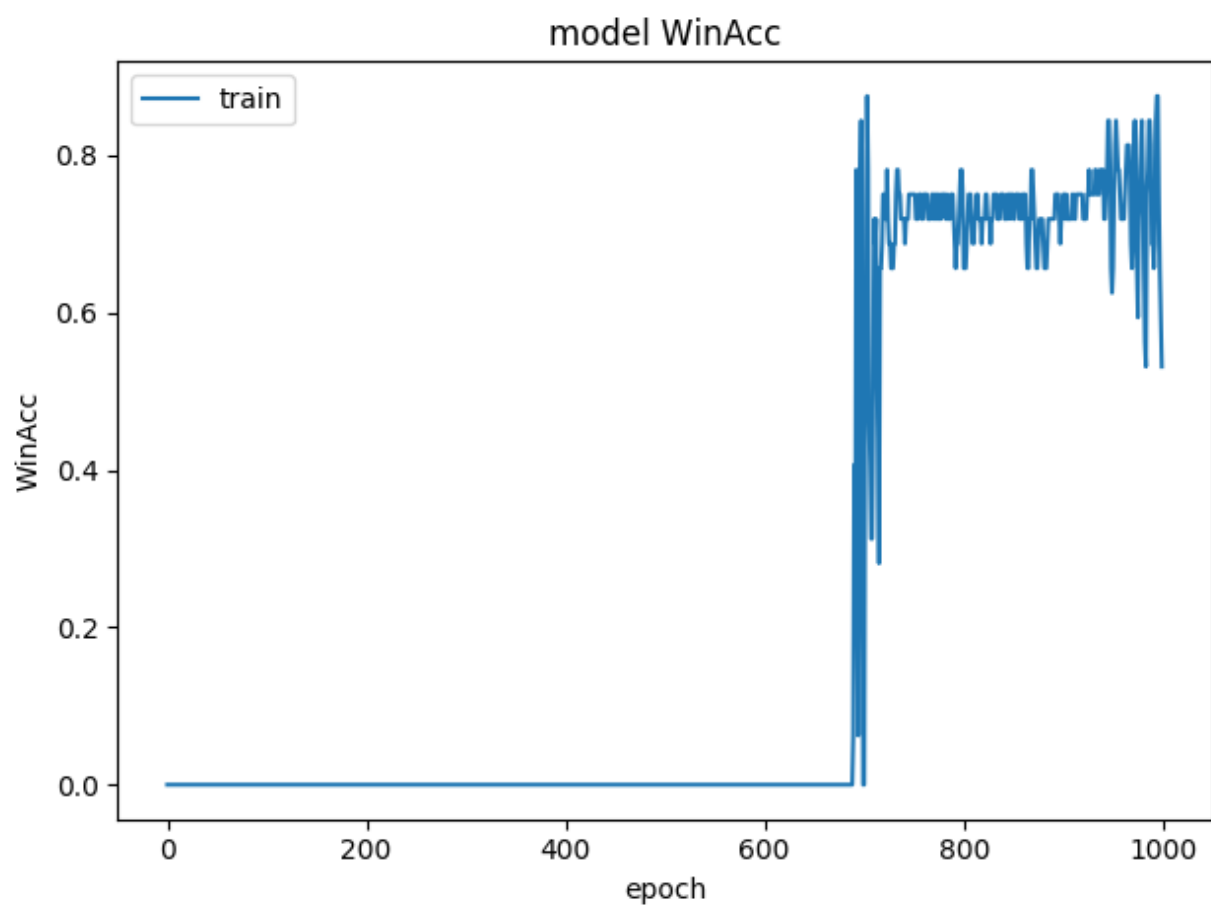
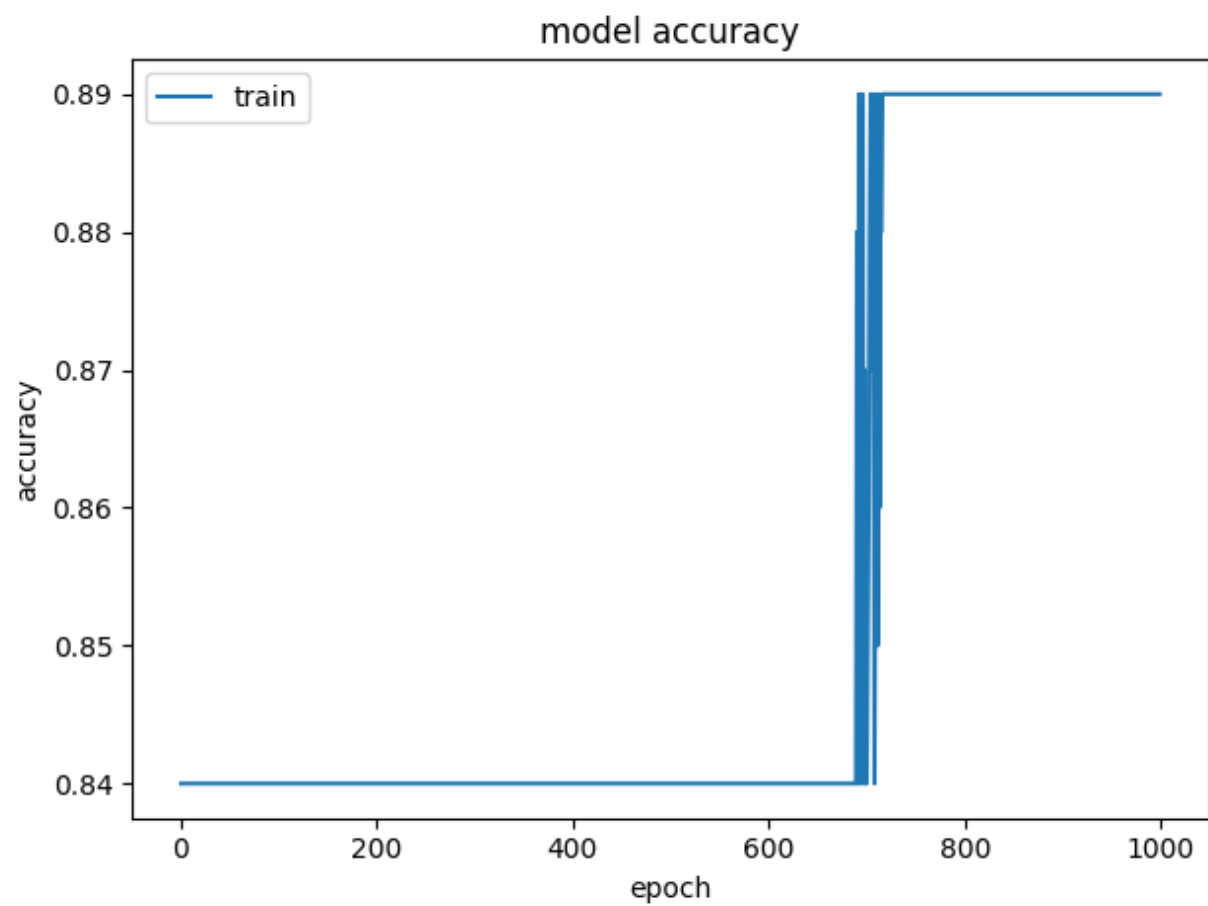


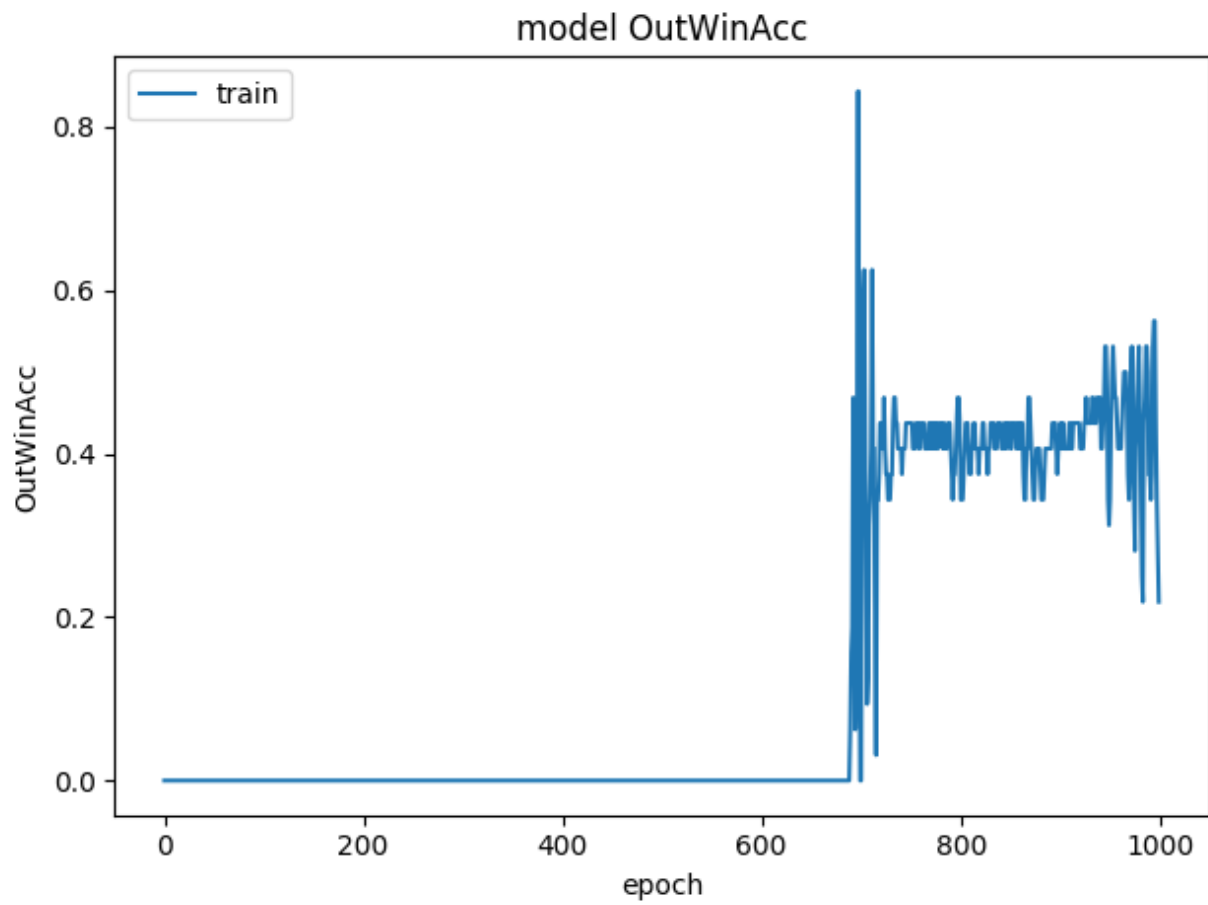




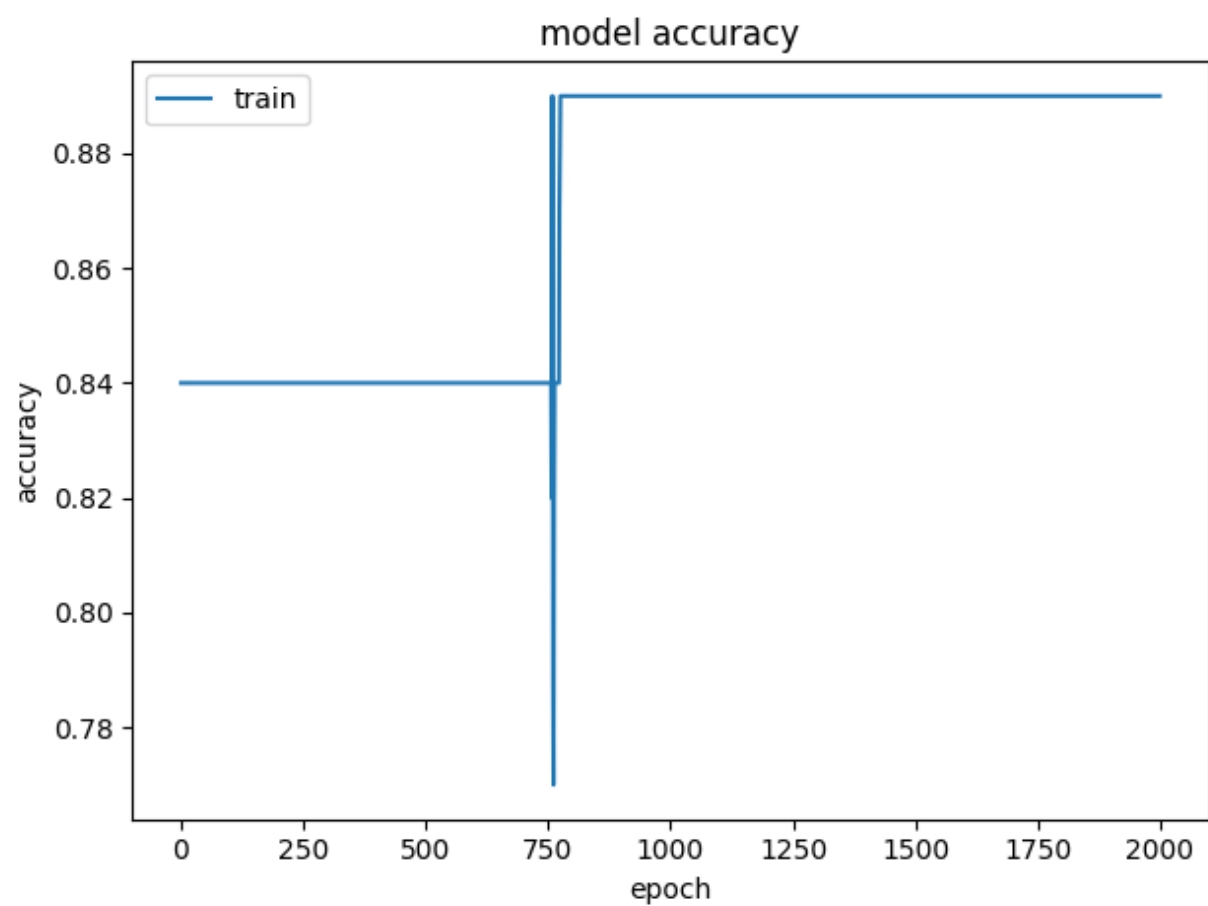
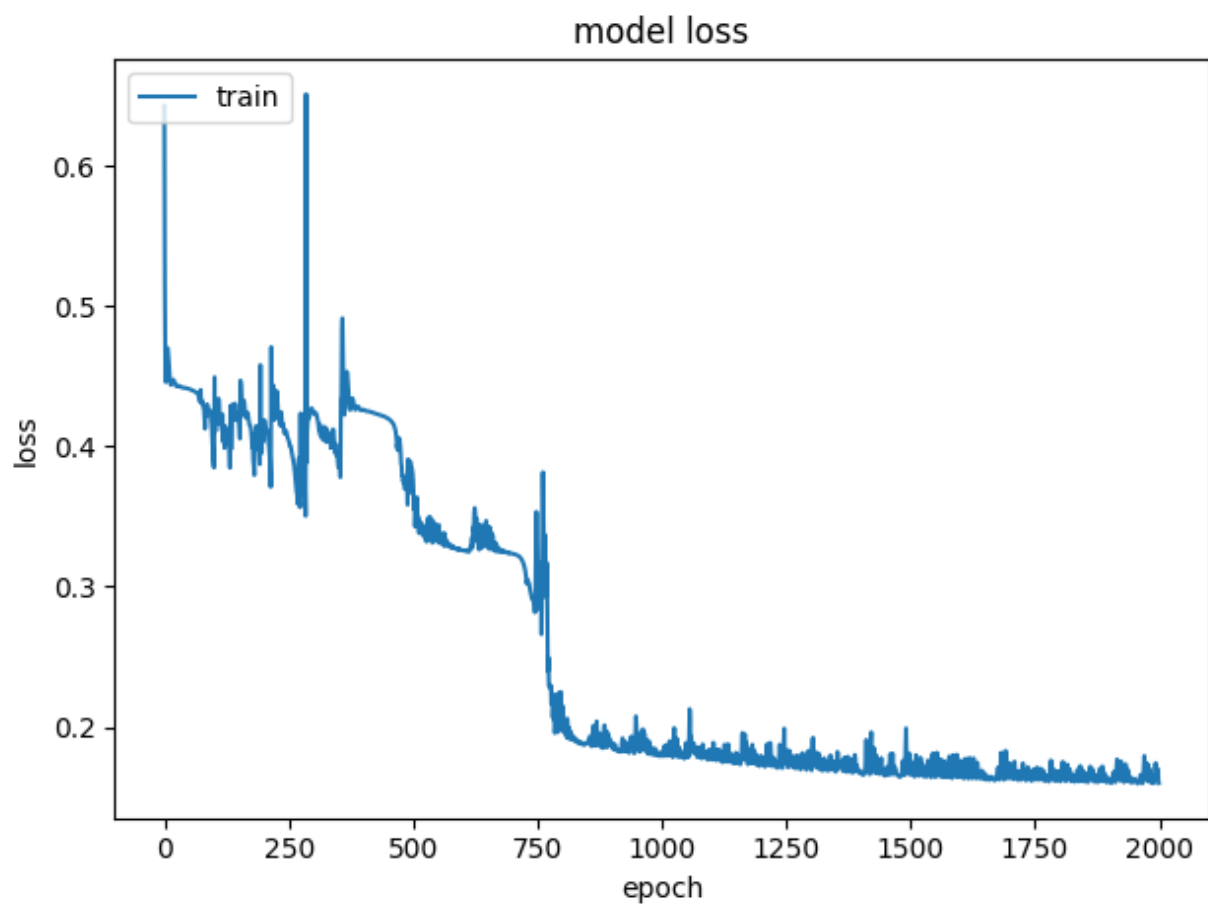
8. adam - avec Ctime et L2 (decay = 1e-6)



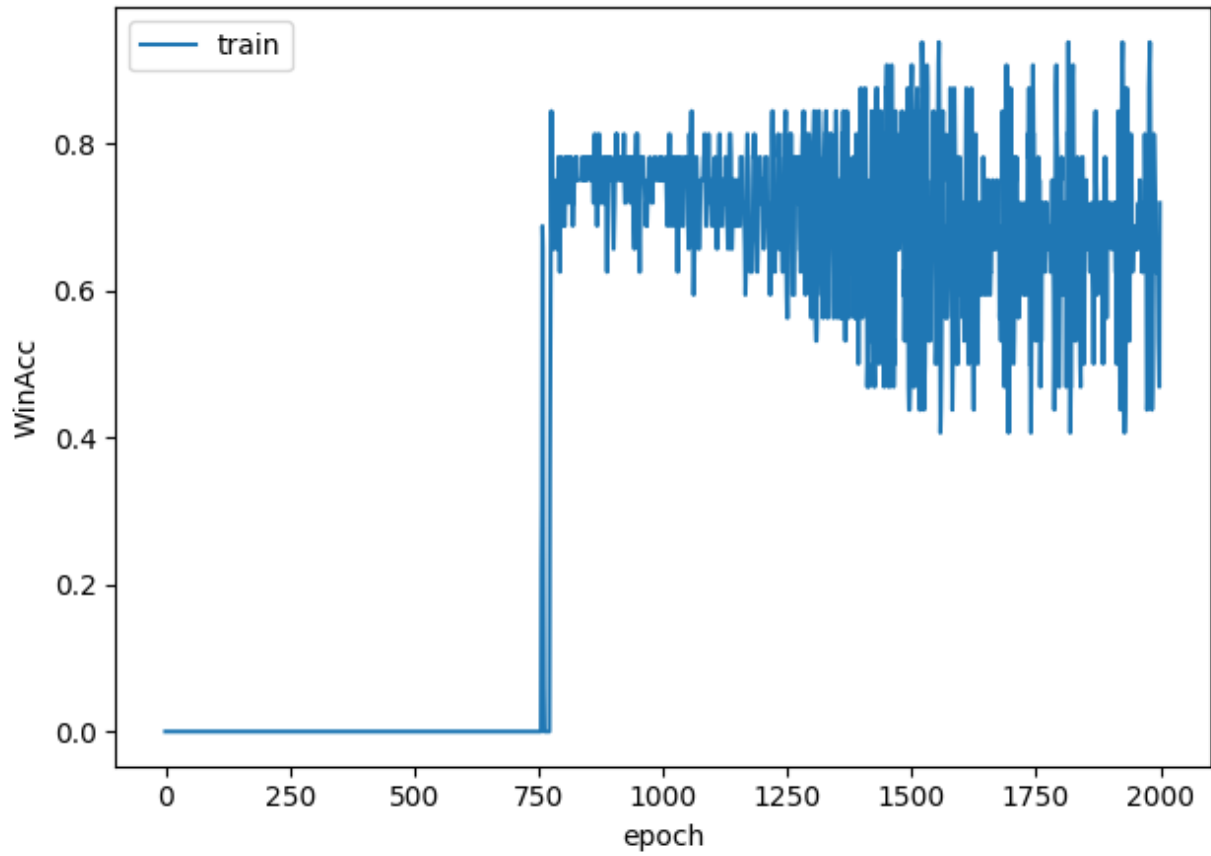




9. adam - avec Ctime et L2 (decay = $1e-6$)(epoch = 2000)



model WinAcc



model OutWinAcc

