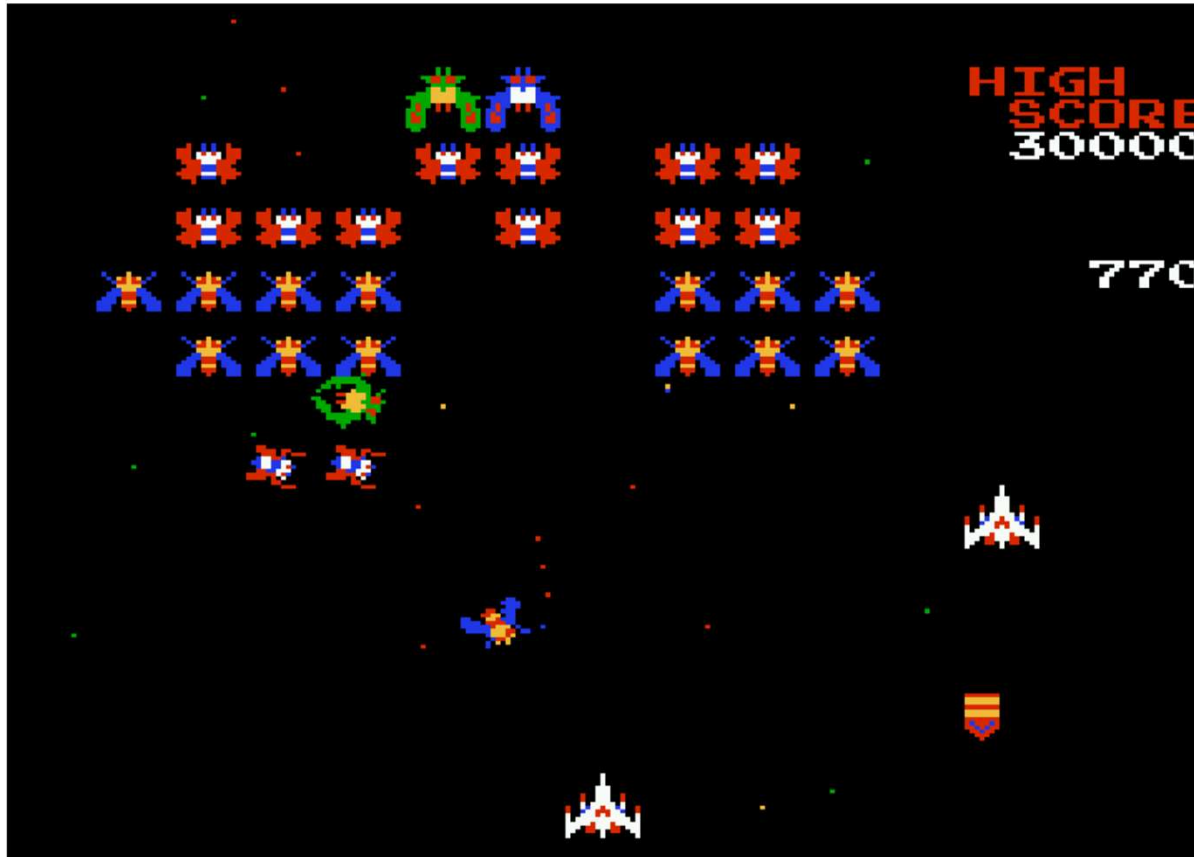




COMPARING SINGLE & DOUBLE DEEP-Q NETWORKS FOR AI LEARNING TO PLAY GALAGA

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CS 5640



Picture of the video game *Galaga*

Brief Refresher:

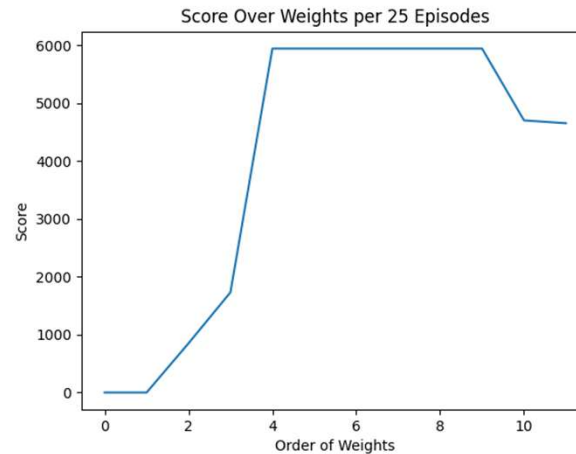
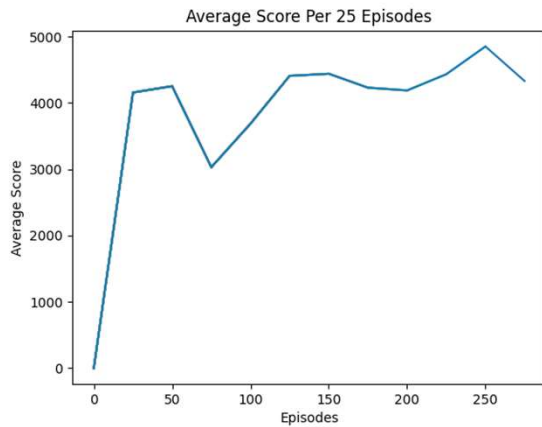
I am comparing a Double DQN vs a singular DQN for an agent learning to play Galaga.

Progress:

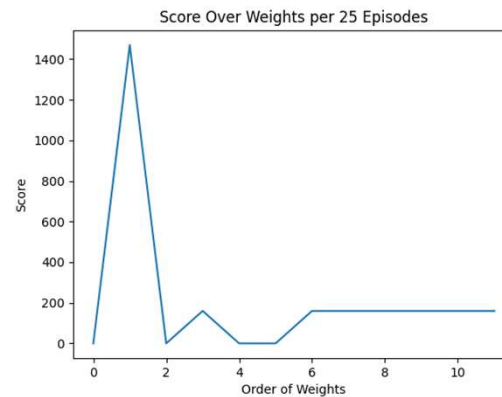
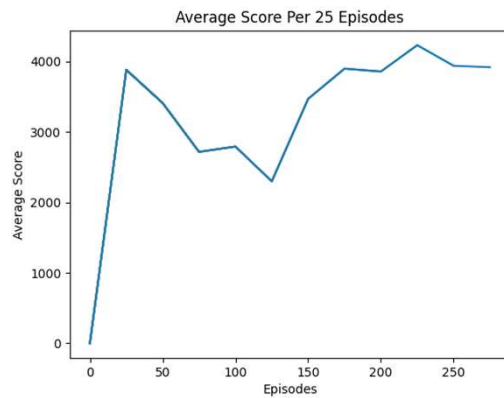
I have decreased the exploration rate decay for both agents and I have preliminary results for both after running them using CHPC computing resources (see next slide).

I also have finished a rough draft of my final report.

DQN Network



DDQN Network



Next Steps:

- Train both agents with a new idle steps limitation instead of the hard total steps per episode limitation using CHPC resources.
- Write the report