

Tetris Changelog

- 13/03/2022:
 - Added versus mode
 - Added versus mode graphic display
 - Added versus mode rules (Sending garbage)
- 17/03/2022:
 - Added garbage bar display in graphic mode
 - Adjusted the requirement of the garbages appearing on the board from a time delay to dropping a piece without clearing a line
- 27/03/2022:
 - Added nanosleep in game's main loop to not overload the CPU
 - Changed makefile so that clean removes \$(OBJ) instead of *.o
 - Added module AI
 - First evaluation function
- 28/03/2022:
 - Added rotate_left function (Rotation module)
- 31/03/2022:
 - Added search_board function (AI module)
 - Added AI_play function (AI module)
 - Added debug mode (run with -d or --debug)
- 10/04/2022:
 - Added more nanosleep to lower CPU usage
 - Increased nanosleep duration from 0.00005 sec to 0.005 sec
 - move_piece now take a KeyPress instead of an SDL_Event*
- 11/04/2022:
 - Changed buttons implementation, buttons are now a structure
 - Added init_button and init_buttons in Graphic.c
 - Changed draw_menu in Graphic.c
 - Changed mode_choice in Input.c
 - Added the VERSUS menu which has the VERSUS_PLAYER, VERSUS_AI and BACK buttons.
- 15/04/2022:
 - Implemented AI to the game
 - Optimisation of the AI's evaluation function
 - Optimisation of the AI's search function (Will rotate once then test all horizontal position, then rotate once more, etc... compared to before where it'd first move then try all rotations then move...)
- 18/04/2022:
 - Changed Queue from a linked list to a simple list so that copying the queue is simpler in order to test out configurations for the AI
 - Changed all the function of the Queue module to fit that change

- 24/04/2022:
 - The AI's search_board function now take into account the piece's fall into its decision making
 - Game's current piece field went from a Piece* to a Piece
- 27/04/2022:
 - FIXED Bug in the AI's decision making: The AI would turn the piece in the wrong direction to place it. This issue has been fixed
 - Made a evaluate_board2 function that uses evaluate_landscape2 with optimized AI to make better decisions using this [guide](#) as reference.
- 29/04/2022:
 - Made the Audio module (encountered format issues so it's still pretty empty at the moment i'm writing this)
 - FIXED Bug in the AI's decision making: The AI doesn't test the configurations with the line piece rotated vertically because it considered it to be in a conflicting position.
 - The AI can now use the hold feature
 - Added autodrop feature when the piece is at the bottom for too long
- 30/04/2022:
 - Losing a game now returns the player to the menu instead of ending the app
- 16/04/2022:
 - Made some refactoring for the block handling inputs for a single player in the main (Still need to make another one for versus mode or adapt the function to work for both single and two player).
 - Introduced a new structure ConfigData in the AI module. This structure is used to store a configuration, its score and the moves to make to get to said configuration
 - Changed the implementation of search_board function so that it stores the NB_CONFIG best configurations in a list (Will be used later to implement deeper exploration of the game tree)
- 07/06/2022:
 - Fixed memory leak in the AI's search function caused by the lack of free in the Queue. The Queue being an array of pointers of Piece made the copy difficult. In the end, I changed the Queue from an array of pointers of Piece to an array of Piece to avoid having issues with shallow copies.