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# TetrAIs-3doo Documentation

## Overview

This document provides a comprehensive guide to the `TetrAIs-3doo`, a 3D Tetris game implemented using HTML, CSS, and JavaScript with Three.js. This documentation covers the game's structure, functionality, and customization options.

## Game Interface
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The game interface is divided into two main columns: the game column and the table column. The game column displays the 3D Tetris game itself, while the table column contains controls, settings, and high scores.

Game Column Elements

- **Multiplayer Info:** Displays multiplayer connection status and player information.
- **Next Piece Preview:** Shows the upcoming Tetromino.
- **Rotate/Zoom Controls:** Buttons for rotating and zooming the game view, optimized for smaller screens.
- **Status Bar:** Provides real-time game information including score, level progress, and game speed.
- **Game Controls:** On-screen buttons for rotating the Tetromino along different axes and dropping it.
- **Messages:** Displays game over, pause, and unlock

messages.

- **Canvas:** The core of the game, rendered using Three.js.

Table Column Elements

- **Control Table:** Buttons for directional movements.
- **Settings:** Adjust game parameters such as music, sound effects, grid depth, and difficulty.
- **High Scores:** Lists the top scores for the current grid depth.

Key Features

- **3D Tetris Gameplay:** Immersive Tetris experience with a 3D grid.
- **Responsive Design:** Adapts to different screen sizes for optimal gameplay on desktops and mobile devices.

- **Customizable Settings:** Fine-tune game settings such as music volume, sound effects, grid depth, and difficulty level.
- **Multiplayer Integration:** Supports multiplayer functionality via WebsimSocket.
- **Tutorial and Help:** Includes a tutorial screen explaining the game rules, controls, and scoring system.

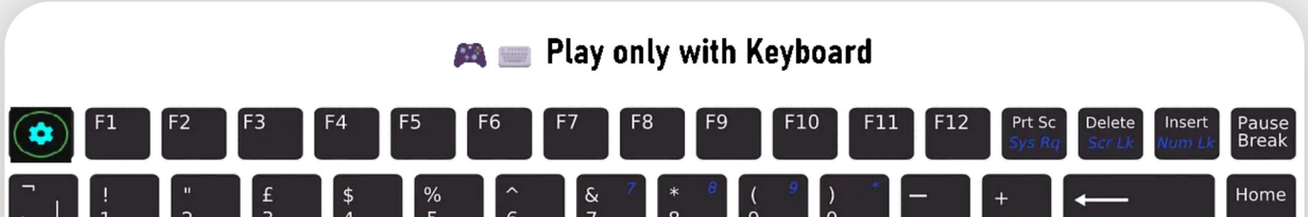
Visual Components

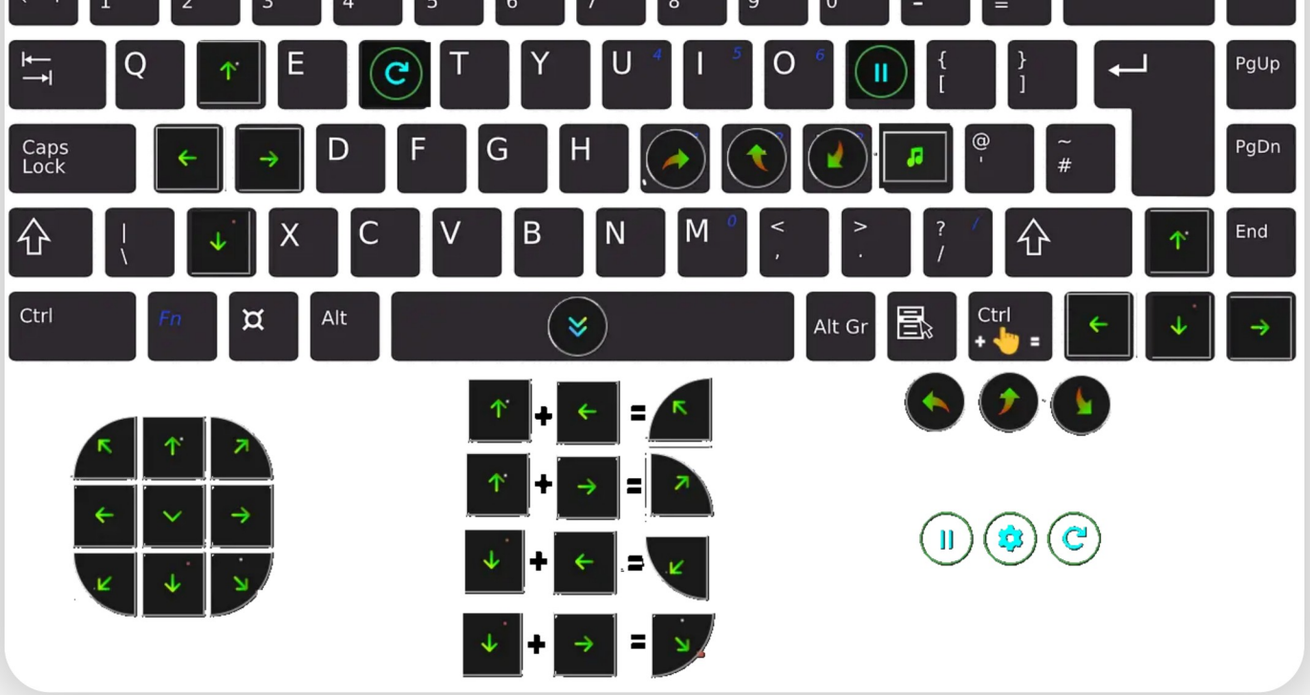
Welcome Screen

The welcome screen features a futuristic 3D Tetris game interface. A robot animation is overlaid for a dynamic effect.

Game Controls

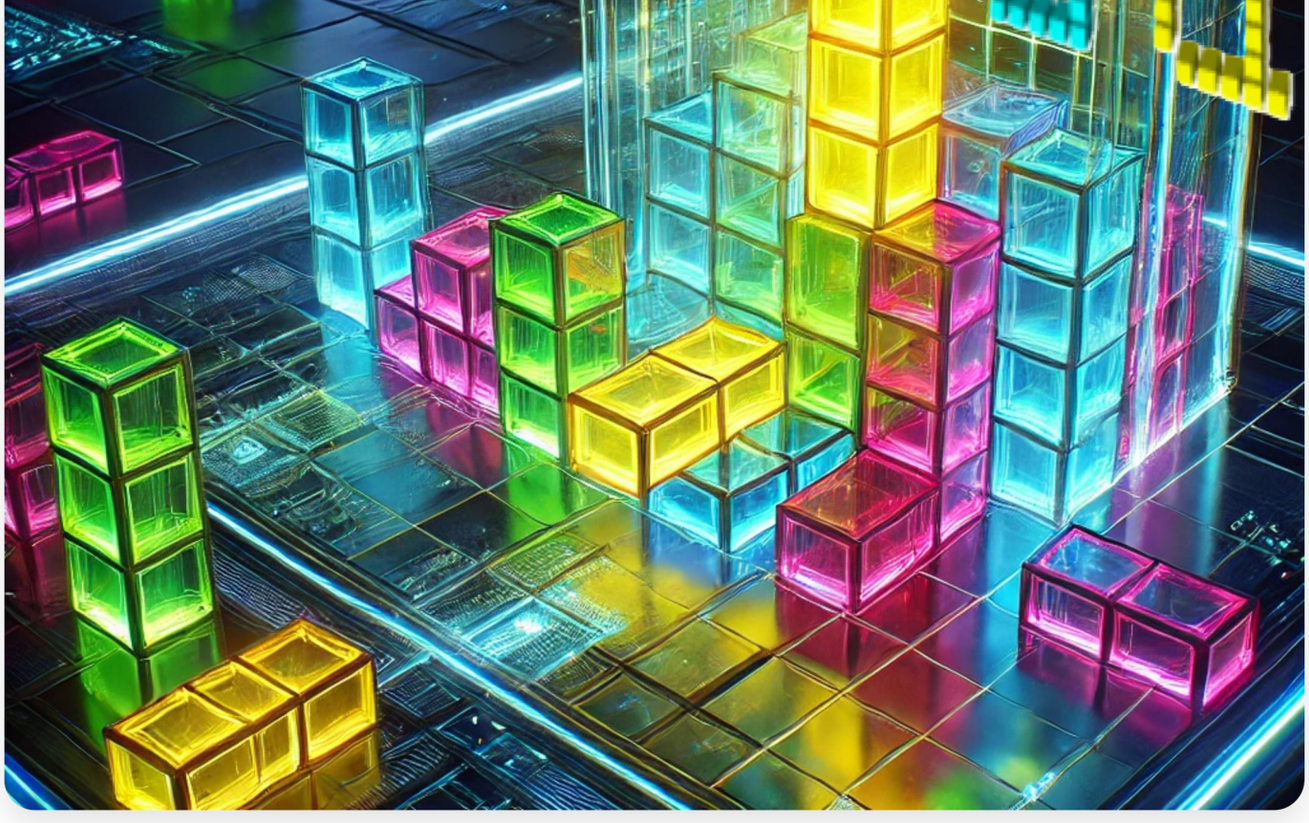
The control image displays keyboard, mouse, and on-screen touch controls for TetrAIs 3D.





High Score Visualization

A futuristic depiction of high scores, emphasizing the competitive aspect of the game.



Game Controls and Movements

The game provides multiple control schemes to cater to different player preferences:

Keyboard Controls

- **Arrow Keys:** Move the Tetromino left, right, or down.

- **Spacebar:** Instantly drop the Tetromino.
- **J, K, L Keys:** Rotate the Tetromino around the X, Y, and Z axes, respectively.

Mouse Controls

- **Left Click & Drag:** Move the Tetromino within the grid.
- **Right Click:** Rotate the Tetromino.
- **Mouse Wheel:** Zoom in or out of the grid.

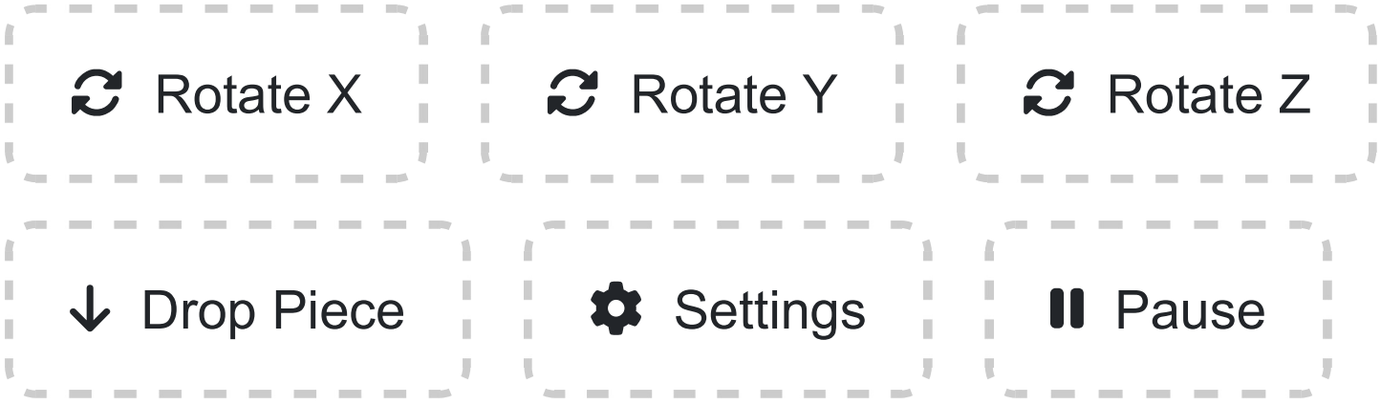
Mobile and Tablet Controls

- **Tap & Drag:** Move the Tetromino within the grid.
- **On-Screen Buttons:** Rotate the Tetromino and navigate it.

Draggable Buttons

Users can drag the following on-screen buttons to customize the

layout:



Game Settings

The game provides customizable settings to tailor the gameplay experience:

Setting	Description
Music Track	Select from various background music tracks provided by BenSound.

Setting	Description
Volume Control	Adjust the volume of the background music.
FX Sound Control	Toggle sound effects on or off.
Grid Depth Control	Customize the depth of the 3D grid (values from 2 to 10).
Drag Speed	Set the sensitivity of piece movement during drag operations.
Automatic Drop on Release	Enable or disable automatic dropping of the Tetromino upon releasing the drag.

Setting	Description
Automatic Zoom	Toggle automatic camera zoom based on the game's progress and grid fill level.
Game Difficulty	Select between Easy, Medium, or Hard to adjust the Tetromino speed.

In-Game Status Bars

Real-time information is displayed through status bars, offering insights into game progression.

- **Pieces Bar:** Tracks the number of pieces placed relative to the level’s requirement.

- **Progress Bar:** Shows how close the grid is to being filled, influencing gameplay.
- **Speed Bar:** Displays the current game speed, which varies based on difficulty and gameplay dynamics.
- **High Score Bar:** Indicates the player's current score in relation to their highest score.

Scoring System

The scoring system is multifaceted, rewarding different line clearances and incentivizing strategic play:

- **Line Clear Multipliers:**
  - 1 Line: 100 Points
  - 2 Lines: 300 Points
  - 3 Lines: 500 Points

    - 4 Lines: 800 Points
    - More lines cleared : more points!
- **Shape Unlocking:** New shapes unlock as the player reaches scores of 600, 1200, and 2000 points.
- **Bonus Rewards:** A score multiplier activates randomly when consecutive lines are cleared.

Tutorial Guide & Multiplayer

Comprehensive explanations on gameplay mechanisms:

- **Scoring and rules :** All Scoring methods are detailed
- **Game rules :** All Rules are in the tuto

For future enhancements and further exploration, users can visit:

- **Multiplayer :** The multiplayer version offers you a avatar display

Important Links

For future enhancements and further exploration, users can visit:

- CAD AI Support Blog
- BenSound Music Library
- Tetris Mania Type Font

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