

CodSoft Internship — Task 2

Tic-Tac-Toe AI (Unbeatable with Minimax + Alpha-Beta)

Overview

This project is part of my CodSoft AI Internship (Task 2). It implements a Tic-Tac-Toe AI that is unbeatable, built with the Minimax algorithm enhanced with Alpha-Beta pruning.

Features

- Modern Web UI with neon styling and animated background
- Terminal (CLI) version
- Tkinter GUI version
- Flask backend with REST API
- Local JS Minimax fallback
- Switch side, restart, and AI vs AI (future-ready)
- Unit tests included

Installation & Setup

1. Clone the repository
2. Setup backend with Flask
3. Serve frontend with Python http.server

Usage

Run terminal version, GUI, or access via web at <http://localhost:8000/>

API Reference

Endpoint: `/api/move` (POST)

Payload: { board: [...], ai: 'X', human: 'O' }

Response: { move: 5 }

Future Improvements

Multiplayer mode, adaptive difficulty levels, AI tournament simulation, deploy live demo.

Author

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