### README

# Sudoku Solver with Backtracking

This project implements a Sudoku solver using the backtracking algorithm. The solution is presented with a minimalistic and stylish UI inspired by the ChatGPT theme.

## Features

- \*\*Sudoku Solver\*\*: Automatically solves Sudoku puzzles using the backtracking algorithm.

- \*\*Interactive Grid\*\*: Users can input their own Sudoku puzzles.

- \*\*ChatGPT Theme\*\*: A modern and clean interface with dark backgrounds and vibrant accents.

- \*\*Responsive Design\*\*: The interface adapts to different screen sizes for an optimal experience on any device.

## Project Structure

- `index.html`: The main HTML file that structures the Sudoku grid and buttons.

- `styles.css`: Contains the CSS styling for the Sudoku solver, including the ChatGPT-inspired theme.

- `script.js`: Contains the JavaScript code for the Sudoku solver logic.

## Getting Started

To get started with this project, simply download the files and open `index.html` in your web browser.

### Prerequisites

No prerequisites are needed to run this project.

### Installation

1. \*\*Clone the repository\*\*:

```bash

git clone https://github.com/yourusername/sudoku-solver.git

```

2. \*\*Navigate to the project directory\*\*:

```bash

cd sudoku-solver

```

3. \*\*Open `index.html` in your preferred web browser\*\*:

```bash

open index.html

```

## Usage

1. \*\*Input Sudoku Puzzle\*\*: Enter the numbers of the Sudoku puzzle you want to solve. Leave the cells empty for unsolved cells.

2. \*\*Solve Puzzle\*\*: Click the "Solve" button to solve the Sudoku puzzle using the backtracking algorithm.

3. \*\*Reset Puzzle\*\*: Click the "Reset" button to clear the grid and input a new puzzle.

## Customization

### Changing Theme

To customize the theme, you can modify the `styles.css` file. Adjust colors, fonts, and other styles to match your preference.

### Enhancing Functionality

You can enhance the functionality by editing `script.js`. Add new features, improve the solver algorithm, or integrate additional logic.

## Contributing

Contributions are welcome! Feel free to open issues or submit pull requests with your enhancements.

### Steps to Contribute

1. Fork the repository

2. Create a new branch (`git checkout -b feature-branch`)

3. Commit your changes (`git commit -m 'Add some feature'`)

4. Push to the branch (`git push origin feature-branch`)

5. Open a pull request

## License

This project is licensed under the MIT License - see the [LICENSE](LICENSE) file for details.

## Acknowledgements

- [Sudoku Backtracking Algorithm](https://en.wikipedia.org/wiki/Sudoku\_solving\_algorithms#Backtracking) for the algorithm logic.

- [Montserrat](https://fonts.google.com/specimen/Montserrat) font used in the project.

## Contact

If you have any questions or suggestions, feel free to reach out at your.email@example.com.

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This README provides an overview of the project, installation instructions, usage guidelines, and contribution details. Customize the content as needed to better fit your project specifics.