**SVG Brain Logo Animation - Custom React Progress Bar Component**

**Project Overview**

I need a custom React TypeScript progress bar component that uses my existing brain logo SVG as the basis for an animated loading indicator. The component should feature an "unwinding" animation effect where the brain's neural pathways fill up to show progress.

**Detailed Requirements**

**Core Progress Functionality**

The component must support multiple ways to determine progress:

1. **Direct Percentage** (totalPercent?: number)
   * Optional parameter
   * If provided, directly sets the progress percentage (0-100)
2. **Value-Based Calculation** (value?: number, maxValue?: number)
   * Optional parameters
   * If both are provided, progress is calculated as: (value/maxValue) \* 100
   * These take precedence over totalPercent if all are provided

**Visual Customization**

1. **Background Visualization** (backgroundColor?: string)
   * Optional parameter
   * If provided, shows a background track where the progress bar will extend to
   * If not provided, background remains completely transparent
   * Only the active progress portion should be visible
2. **Progress Label** (showLabel?: boolean)
   * Optional parameter
   * If true, displays the current percentage in the middle/slightly above the progress bar
   * Should show calculated percentage from either direct input or value/maxValue calculation

**Technical Requirements**

* Built with React + TypeScript
* Fully typed props interface
* Responsive design
* Smooth animations
* Support for different sizes/dimensions
* Proper error handling for invalid inputs
* Accessibility considerations (ARIA attributes)

**Component Interface Example**

Typescript

interface BrainProgressProps {

// Core progress props

totalPercent?: number;

value?: number;

maxValue?: number;

// Visual customization

backgroundColor?: string;

showLabel?: boolean;

// Optional customization

width?: number;

height?: number;

customColors?: {

primary?: string;

secondary?: string;

};

animationSpeed?: number;

}

**Deliverables**

1. React TypeScript Component
   * Clean, documented code
   * Proper prop types and interfaces
   * Responsive and accessible
2. Documentation
   * Installation instructions
   * Usage examples
3. Working Demo
   * Interactive demo showing all features
   * Examples of different configurations
4. Source Code
   * GitHub repository