



LEARNABLE AI

Created by Team Thunderbolts



OUR TEAM :

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GITHUB REPO :

https://github.com/Guri007dhiman/LearnAble_AI



PROBLEM STATEMENT



Over 700 million individuals worldwide face reading and comprehension challenges due to dyslexia. Traditional learning systems lack adaptive, accessible tools that address their needs — resulting in academic stress, exclusion, and over-dependence on external support.

OUR SOLUTION - LEARNABLE AI

An AI-powered learning assistant that:

- Simplifies complex content
- Reads aloud in emotional tone
- Creates personalized lesson plans
- Adds visual aids for better comprehension
- Adapts to individual learning pace

LEARNABLE AI

LearnAble AI is an inclusive AI-powered teaching copilot designed for individuals with dyslexia. It transforms traditional educational material into accessible, multisensory content by simplifying text, narrating it with emotional voice, generating lesson plans, and adding visual aids — all in real time.

TECH STACK

Frontend and Backend:

React, Tailwind CSS, Vite, TypeScript, ShadCN UI

AI Services:

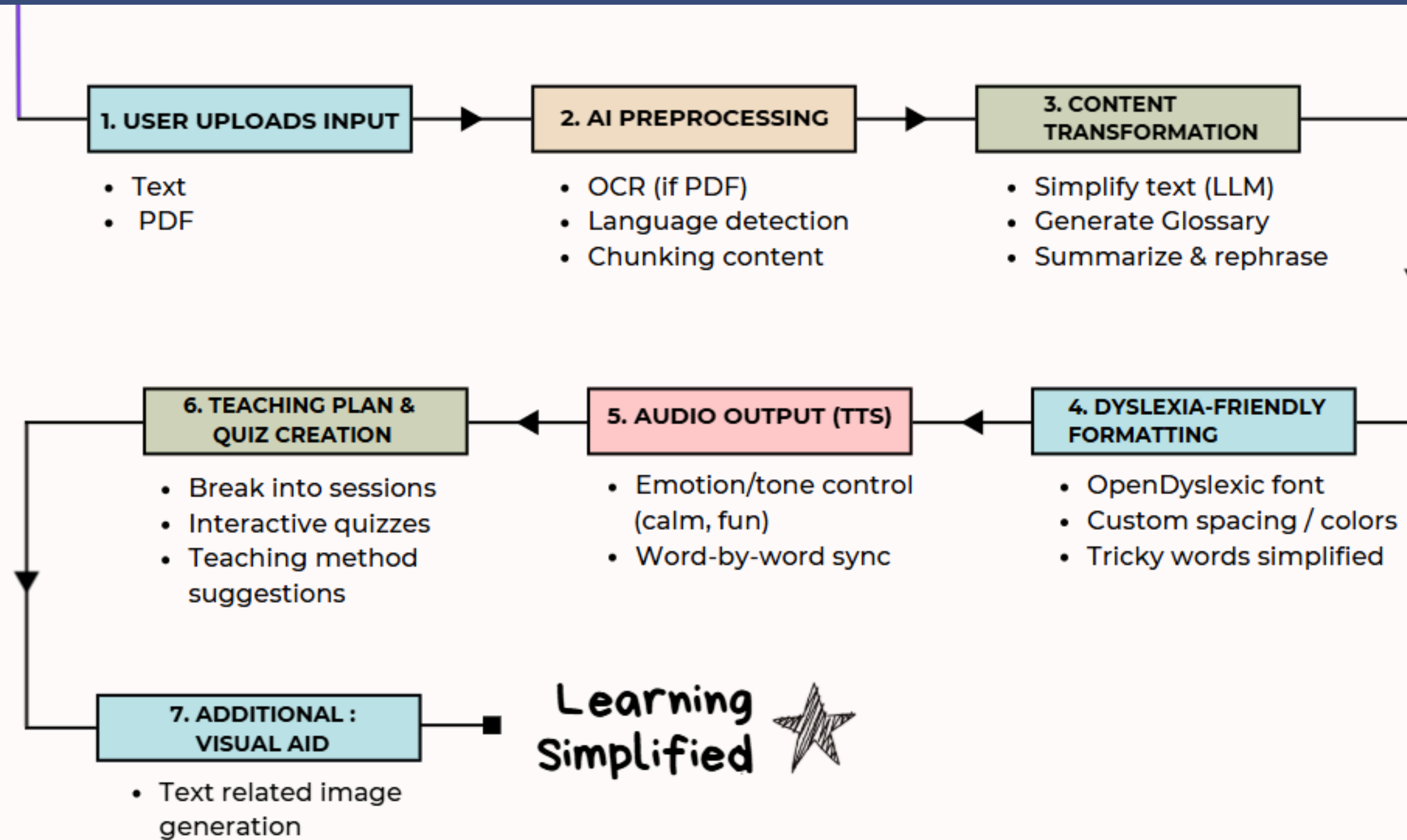
- Gemini API – Text simplification
- ElevenLabs – Text-to-Speech
- Pexels API – Visuals for conceptual aid
- PDF2MD – PDF text extraction

INNOVATION & UNIQUENESS


- Combines AI-based simplification, emotional voice modulation, and visual support.
- Supports adaptive teaching strategies based on user pace and needs.

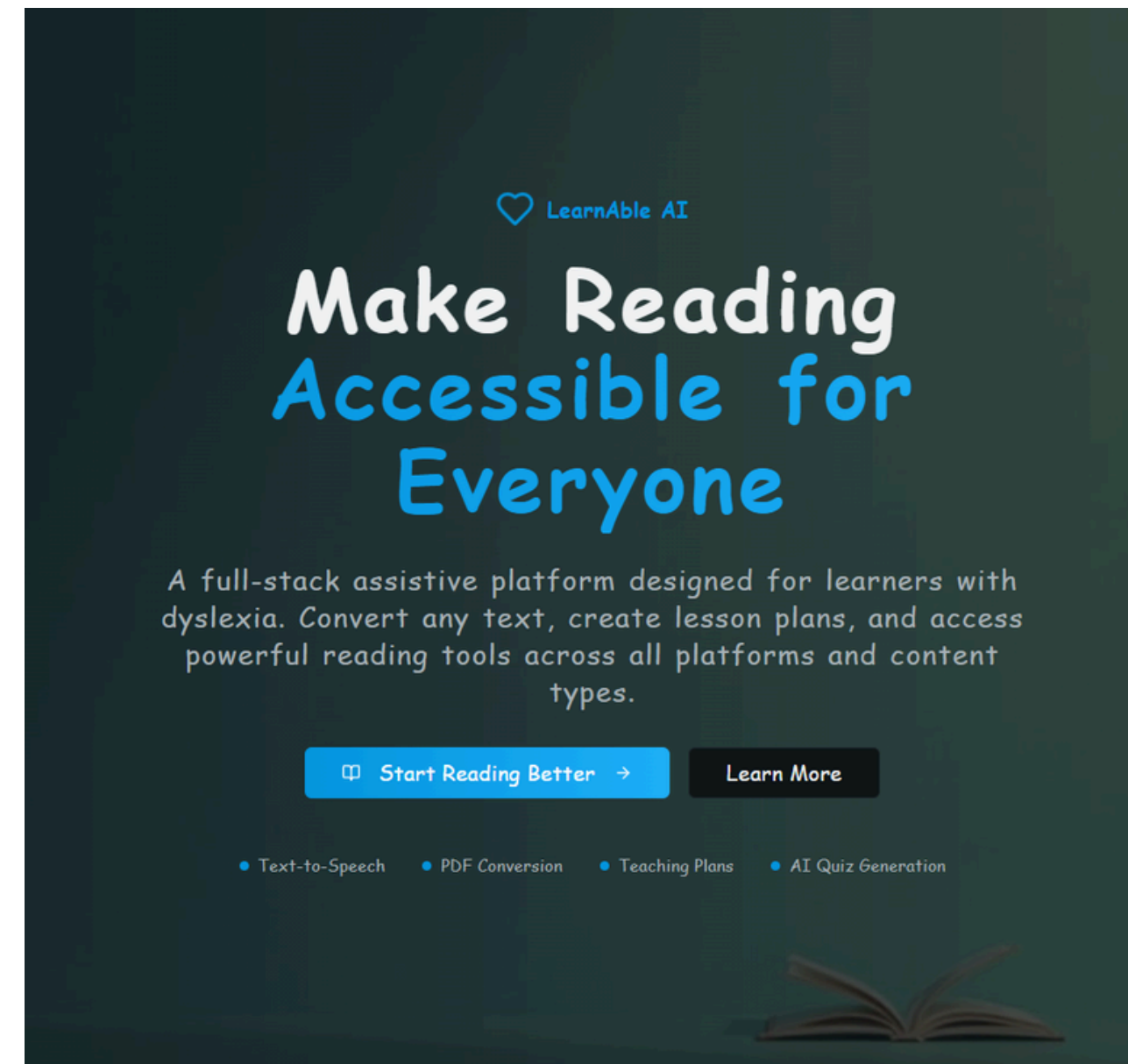
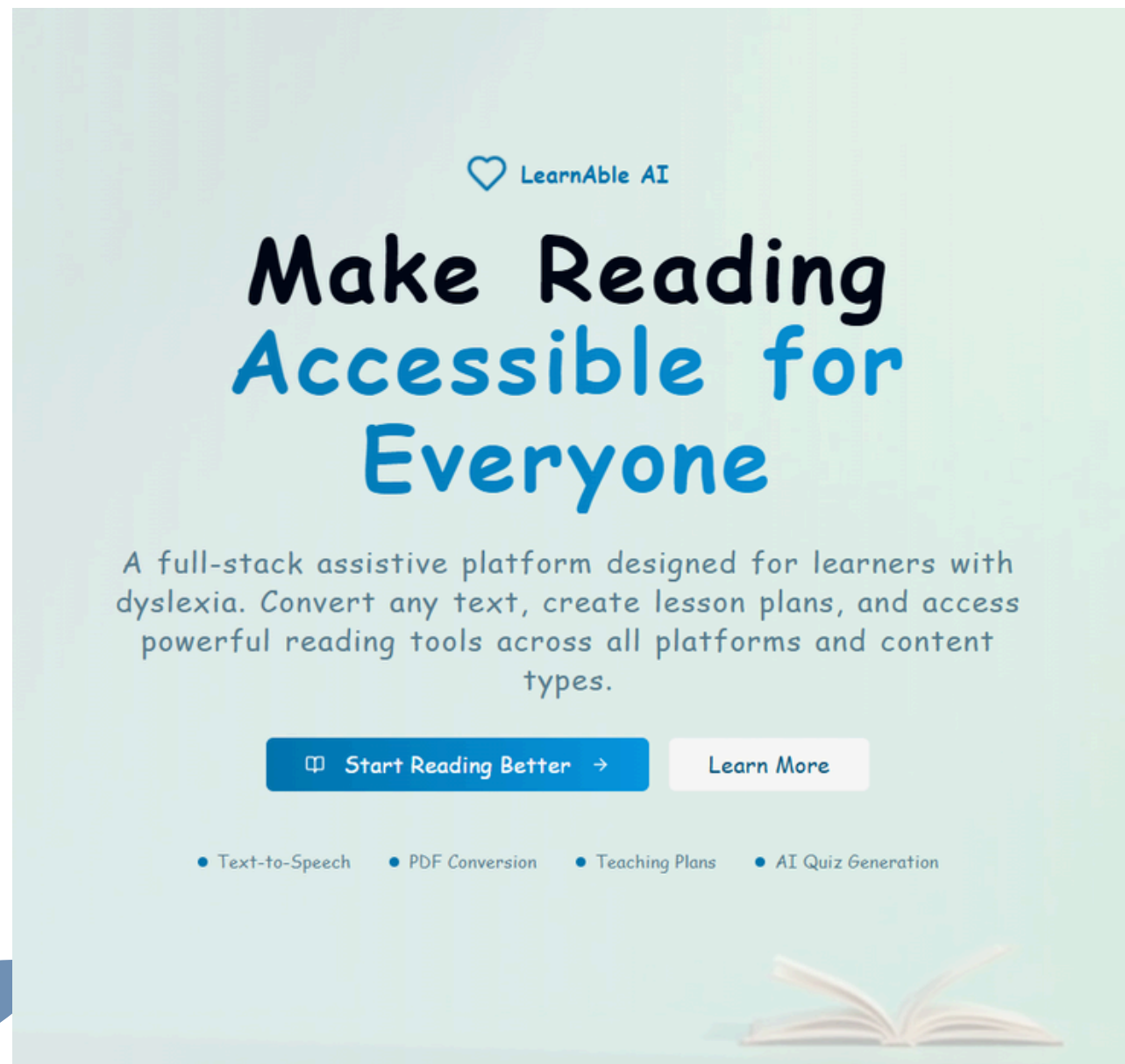
- Promotes accessibility through multi-sensory learning experiences.
- Scalable to support other learning disabilities (ADHD, autism).

HOW IT WORKS:



MAIN PAGE :

- Gives description of what LearnAble AI is.
- Comes with a dark/light mode switch 



MAIN PAGE :

- **Teaching Plans & Methods:** Custom dyslexia-aware lesson plans with visuals.
- **Text & PDF to Dyslexia-Friendly Format + TTS:** Converts text with customizable fonts and reads it aloud with natural voice.

Powerful Tools for Every Learning Style

Our comprehensive platform provides everything educators, students, and families need to make reading accessible and enjoyable for learners with dyslexia.



Teaching Plans & Methods

Generate custom dyslexia-aware lesson plans with multiple learning modes and visual aids




Text & PDF to Dyslexia-Friendly Format with Advanced TTS

Convert any text or PDF to dyslexia-friendly format with customizable fonts, spacing, and natural voice reading

TEXT CONVERSION + ADVANCED TTS

- Page Layout:

[← Back to Modules](#)

Text & PDF to Dyslexia-Friendly Format with Advanced TTS

Upload a PDF or type your text below, customize it for better readability, and use natural voice reading


T Text Input & Advanced TTS


Enter text and use natural voice reading with dyslexia-friendly settings


Upload PDF or Text File


Choose File No file chosen


Paste your text here or upload a PDF/text file...


 Generate Speech

 Play


 Stop


 Download Audio

 Simplify Text

 Download Text

▶ 0:00 / 0:00





🔊 Voice Settings

Customize voice settings for dyslexia-friendly reading

Voice Selection

Aria (Female, Clear) ▾

Voice Tone

Calm & Soothing ▾

Speed: 1.0x

Pitch: 1.0

Word Highlighting

On

Highlight Color

#3b82f6

TEXT CONVERSION + ADVANCED TTS

- Text Before Simplification :

T Text Input & Advanced TTS

Enter text and use natural voice reading with dyslexia-friendly settings

Upload PDF or Text File

Choose File

No file chosen

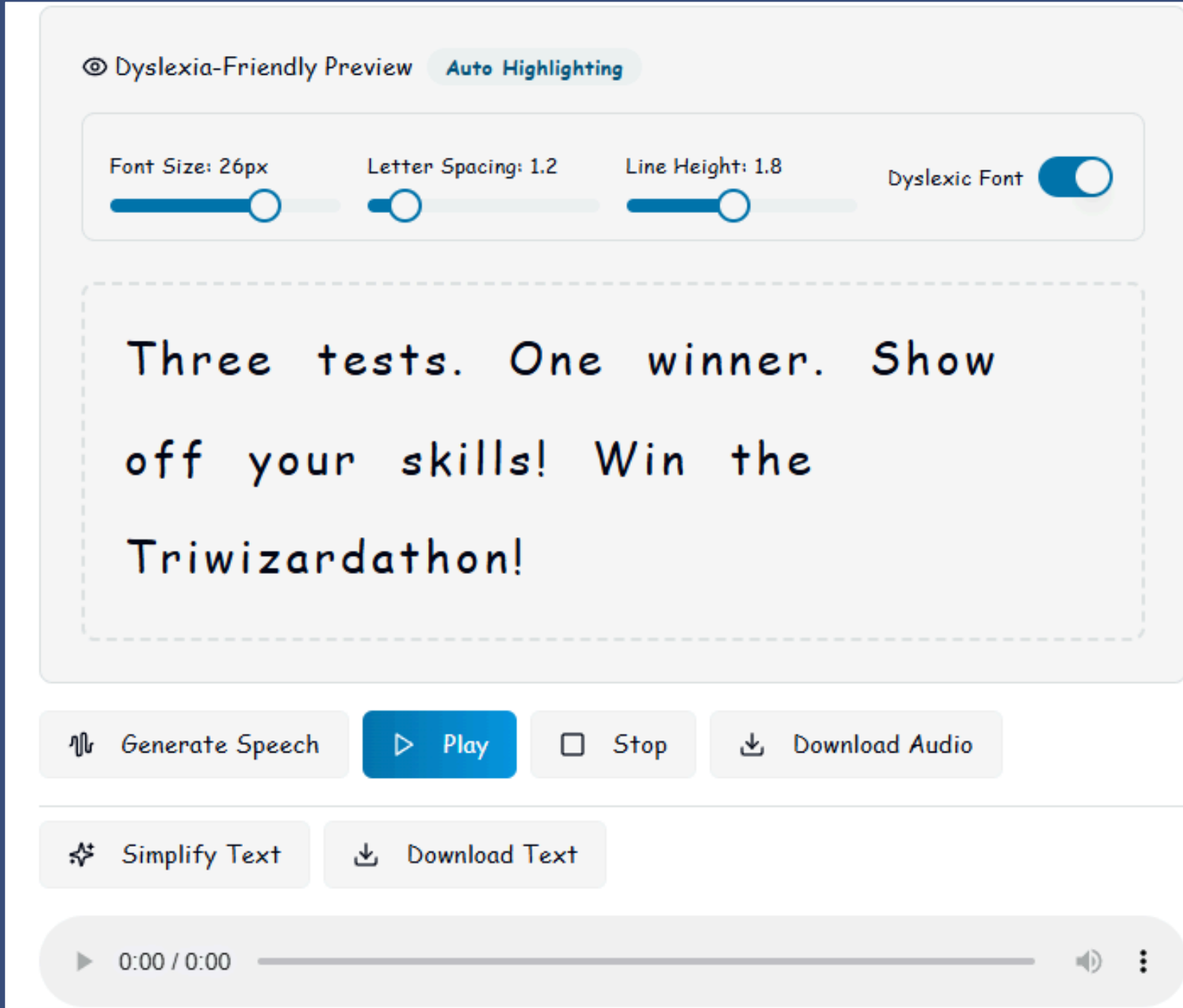
Triwizardathon

Where Professional Excellence Meets Innovation. Three Challenges. One Ultimate Champion.

Elevate Your Development Journey to Legendary Status

TEXT CONVERSION + ADVANCED TTS





- Text After Simplification :








© Dyslexia-Friendly Preview **Auto Highlighting**

Font Size: 26px Letter Spacing: 1.2 Line Height: 1.8 Dyslexic Font ☒

Three tests. One winner. Show
off your skills! Win the
Triwizardathon!


 Generate Speech  Play  Stop  Download Audio

 Simplify Text  Download Text

▶ 0:00 / 0:00   

TEXT CONVERSION + ADVANCED TTS

- Customizable voice settings along with word highlighting:

 **Voice Settings**
Customize voice settings for dyslexia-friendly reading

Voice Selection

Aria (Female, Clear) ▾

Voice Tone


Calm & Soothing ▾

Speed: 1.0x

Pitch: 1.0

Word Highlighting ☒ On

Highlight Color

 #3b82f6

Voice Selection :

- ✓ Aria (Female, Clear)
- Sarah (Female, Warm)
- Charlie (Male, Friendly)
- Liam (Male, Professional)
- Charlotte (Female, Gentle)

Tone Selection :

- ✓ Calm & Soothing
- Enthusiastic
- Teacher-like
- Playful
- Storyteller

TEXT CONVERSION + ADVANCED TTS

- Quiz Generation :

Quiz Generator

Generate a comprehensive, dyslexia-friendly quiz from your content with multiple question types

Generate Interactive Quiz

Font Size: 21px

****The Triwizardathon Quiz!****

This quiz is about a competition called the Triwizardathon. Let's see how much you know!

****Multiple Choice (Choose the best answer):****

- How many tests are in the Triwizardathon?
a) Two b) Three c) Four d) One
- What is the goal of the Triwizardathon?
a) To lose b) To win c) To sleep
d) To eat
- What is the name of the competition?
a) Wizardthon b) Triwizardathon c) Triwizard d) Wizard
- Is the Triwizardathon a competition for skills?
a) No b) Yes

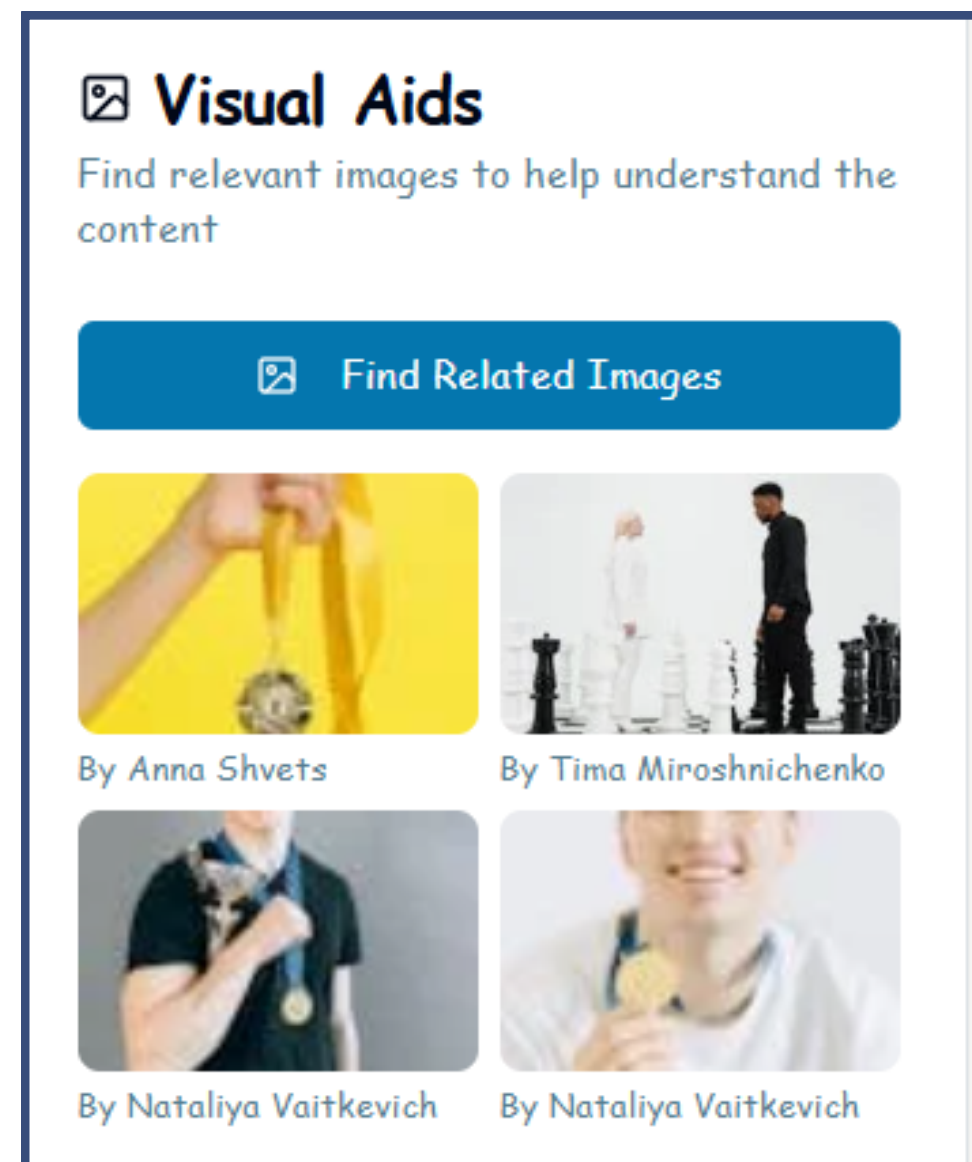
****Answer Key:****

****Multiple Choice:****

- b) Three
- b) To win
- b) Triwizardathon
- b) Yes

TEXT CONVERSION + ADVANCED TTS

Visual Aids Section: Since the input text emphasizes “winning the competition”, the system retrieved images of people receiving medals and trophies — reinforcing the message visually.



TEACHING PLANS & METHODS

- Page Layout :

Teaching Plans & Methods

Generate custom dyslexia-aware lesson plans with evidence-based practices, multiple learning modes, and visual aids tailored to your students' needs.

Lesson Details

Provide information to generate a customized lesson plan

Topic/Subject *

e.g., Fractions, Solar System, Reading Compreh

Grade Level

Select grade level

Primary Learning Style

Select learning style

Lesson Duration

Select duration

Specific Needs (Optional)

e.g., attention challenges, reading level, motor skills...

Generate AI Lesson Plan

Ready to Create

Fill in the lesson details and generate your custom dyslexia-friendly lesson plan

TEACHING PLANS & METHODS

- Input Given :

📖 Lesson Details

Provide information to generate a customized lesson plan

Topic/Subject *

solar system

Grade Level

3-5 (Ages 8-10)

Primary Learning Style

Visual Learner

Lesson Duration

30 minutes

Specific Needs (Optional)

e.g., attention challenges, reading level, motor skills...

✦ Generate AI Lesson Plan

TEACHING PLANS & METHODS

- Output :

✓

Understanding solar system - Dyslexia-Friendly Approach

95% Effective

Download

Visual

Auditory

Kinesthetic

Reading/Writing

AI Plan

Structure

Objectives

Visual Aids

Tips

AI-Generated Lesson Plan

```
## Solar System: A Dyslexia-Friendly Teaching Plan (Grades 3-5, 30 minutes)

**1. Learning Objectives:**

* Students will be able to name the planets in our solar system in order.
* Students will be able to identify the Sun as the center of our solar system.
* Students will be able to describe at least one characteristic of the Earth (e.g., it has water).
* Students will be able to explain that planets orbit the Sun.

**2. Materials Needed:**

* Large poster or whiteboard with a simple diagram of the solar system (planets clearly labeled with large, easy-to-read fonts). Consider using color-coded planets.
* Pictures of each planet (large, clear images).
* Modeling clay or playdough in different colors (for creating planets).
* Flashcards with planet names (large font, pictures, and simple phonetic spellings).
* Multi-sensory aids (e.g., textured planet models, planet sound effects).
* Computer/tablet with access to age-appropriate videos or interactive games about the solar system. (Optional)
```

TEACHING PLANS & METHODS

- Output :

✓

Understanding solar system - Dyslexia-Friendly Approach

95% Effective

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Tips

Lesson Structure

Step 1: Visual Introduction

Begin with colorful, high-contrast visual aids showing solar system. Use large, clear fonts and minimal text per slide.

5 minutes

Step 2: Multisensory Exploration

Engage students through tactile activities, audio descriptions, and interactive elements.

10 minutes

Step 3: Structured Practice

Break down complex concepts into smaller, manageable chunks with frequent check-ins.

15 minutes

Step 4: Creative Expression

Allow students to demonstrate understanding through drawing, storytelling, or movement.

10 minutes

Step 5: Review & Reinforcement

Summarize key points using visual memory aids and repetition techniques.

5 minutes

TEACHING PLANS & METHODS

- Output :

✓ Understanding solar system - Dyslexia-Friendly Approach

95%
Effective

Download

👁 Visual

👂 Auditory

👉 Kinesthetic

📖 Reading/Writing

AI Plan

Structure

Objectives

Visual Aids

Tips

Learning Objectives

- 🎯 Students will be able to identify key concepts of solar system
- 🎯 Students will demonstrate understanding through multiple modalities
- 🎯 Students will build confidence in expressing their knowledge
- 🎯 Students will use visual and auditory aids effectively

TEACHING PLANS & METHODS

- Output :

✓ Understanding solar system - Dyslexia-Friendly Approach

95%
Effective

Download

👁 Visual

👂 Auditory

👤 Kinesthetic

📖 Reading/Writing

AI Plan

Structure

Objectives

Visual Aids

Tips

Visual Aids & Materials

- 👁 High-contrast color-coded charts
- 👁 Mind maps with clear branching
- 👁 Illustrated step-by-step guides
- 👁 Interactive digital presentations
- 👁 Physical manipulatives and props

TEACHING PLANS & METHODS

- Output :

✓ Understanding solar system - Dyslexia-Friendly Approach

95%
Effective

↓ Download

@ Visual

🔊 Auditory

👤 Kinesthetic

📖 Reading/Writing

AI Plan

Structure

Objectives

Visual Aids

Tips

Engagement Tips

- 👤 Use movement breaks every 10 minutes
- 👤 Provide written instructions alongside verbal ones
- 👤 Allow extra processing time for responses
- 👤 Offer multiple ways to demonstrate understanding
- 👤 Create a calm, supportive environment
- 👤 Use positive reinforcement frequently

CONCLUSION

- LearnAble AI is more than a tool — it's a step toward inclusive, independent, and personalized education for learners with dyslexia.
- By combining AI-powered simplification, emotional TTS, visual aids, and adaptive teaching plans, we bridge the gap between accessibility and mainstream learning.
- Our mission is to ensure every student learns their way, without barriers, and with confidence.

⚡ Team Thunderbolts is committed to making learning a right, not a privilege.



Thank You