



INTRODUCING

NextGenEd: Revolutionizing E-Learning

**Amplifying Learning Experiences
with AI Integration**

PURPOSE OF THE APP

- **Purpose of the App:** "NextGenEd is designed to transform how we learn from digital content. By integrating cutting-edge AI, we aim to provide instant educational insights through image and voice recognition technologies."

TARGET AUDIENCE

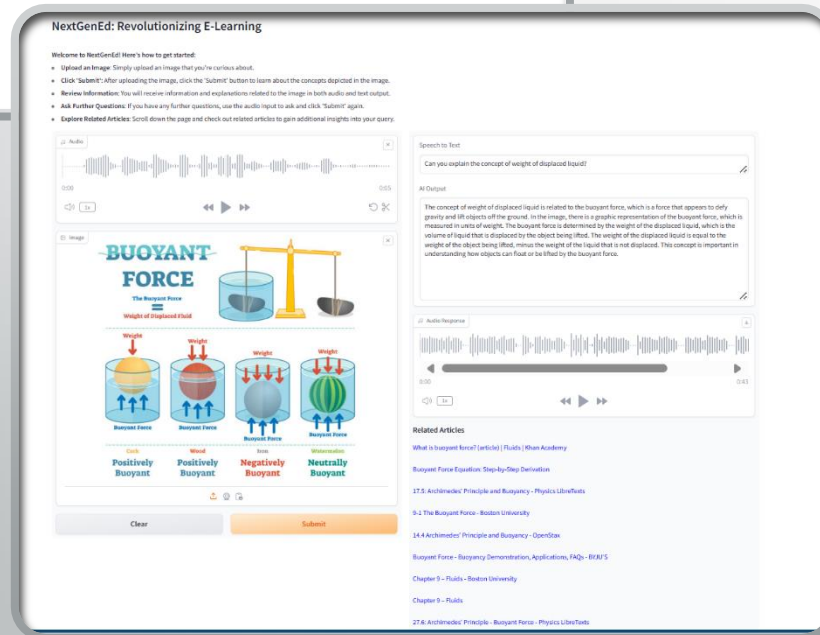
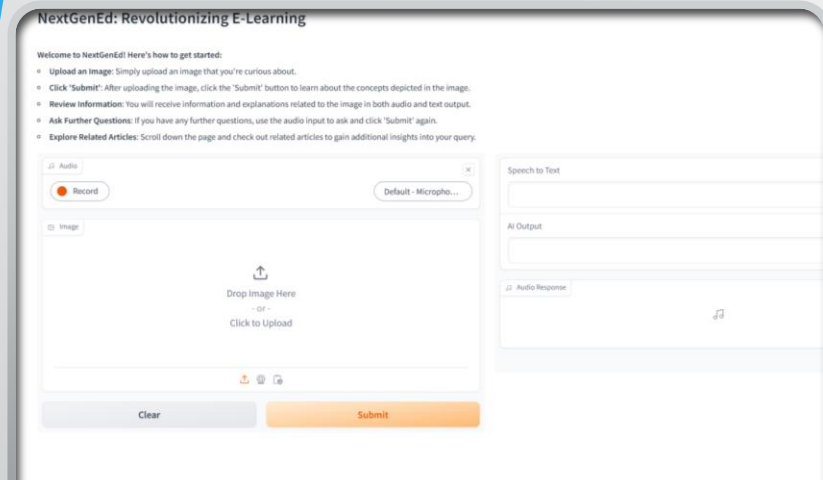
- **Target Audience:** "Ideal for students, educators, and lifelong learners seeking interactive and accessible learning tools."

BRIEF OVERVIEW

- **Brief Overview:** "The app leverages LLaVA AI model for image analysis, Whisper AI for audio processing, gTTS for providing an audible version of the AI's text output, Web-Search API for finding and suggesting articles related to the AI's insights, and Gradio UI (user interface) to deliver a seamless user experience."

OVERVIEW OF NEXTGENED APP

CORE FEATURES



Upload an Image: Users can upload any educational image, such as diagrams or photos, to receive detailed explanations and insights.

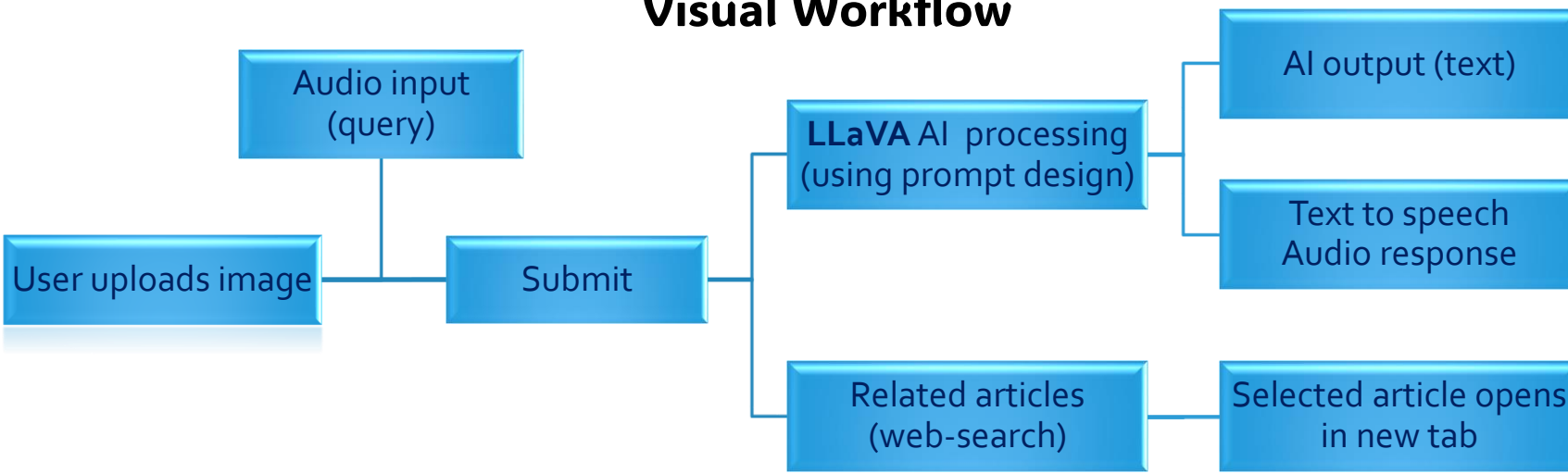
Voice input (Speech to Text): Speak directly to the app to ask questions related to the image content, and our Whisper AI technology will convert your speech to text for processing.

AI-Driven Insights: The LLaVa AI model analyzes images and generates detailed textual information about the depicted subjects, enhancing learning and understanding.

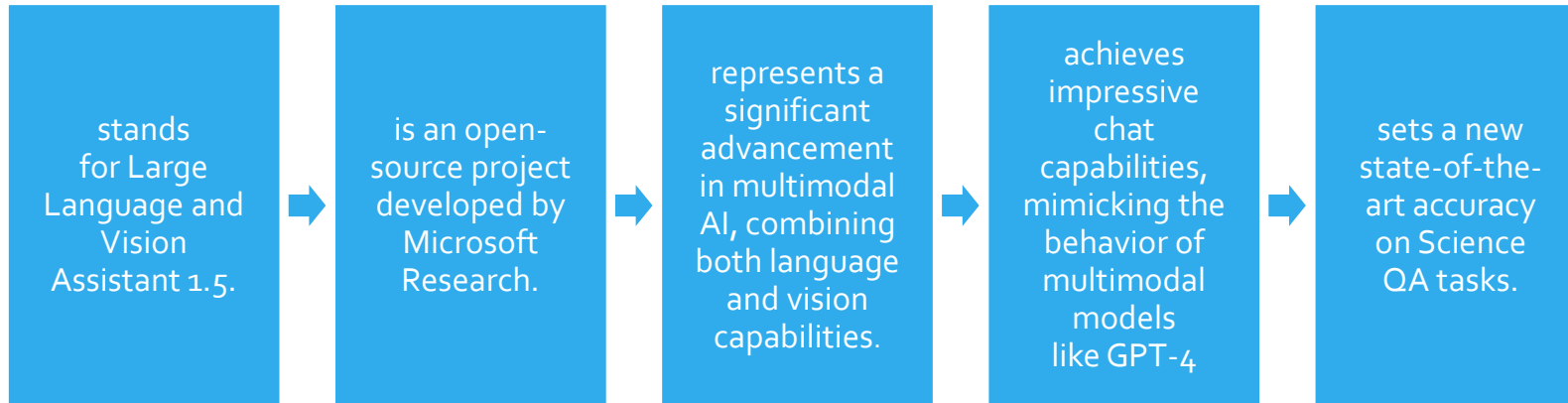
Audio Response (Text to Speech): The AI-generated output is also accessible through an audio response. Just click 'play' to listen.

Discover More: Delve deeper by following hyperlinks to associated articles.

Visual Workflow



Pioneering AI for In-Depth Image Analysis: LLaVA 1.5



**Navigating
the
E-Learning
Journey**

The model LLaVA 1.5 is designed to understand and process both textual and image-based context, making it a powerful tool for various applications.

UNVEILING THE TECH

LLaVA 1.5: LLaVA AI model, through meticulous prompt design thoroughly examine images to explain the depicted concepts, identify topics and fields of study, providing a deep dive into each element within an image. Whether it's text, or symbols or any visual representation, LLava offers comprehensive explanations that enhance understanding, catering to both novices and experts.

Whisper AI: Whisper AI is our audio processing powerhouse, converting spoken words into written text with precision. It facilitates audio input, ensuring that voice interactions are transcribed accurately for further analysis by the system.

Gradio UI: Gradio UI serves as the gateway to our application, providing an intuitive and interactive interface. It allows easy uploading of images and audio and displays the AI-generated content in a user-friendly manner.

gTTS (Google Text-to-Speech): Complementing our AI suite, gTTS provides the text-to-speech capability, transforming the AI-generated textual analysis into spoken words. This ensures that users can receive audio feedback, making the educational content accessible and convenient.

Web-Search Integration (Bing Web Search API): To enrich the educational journey, we integrate with advanced web search functionalities that dynamically suggest articles related to the AI's insights. This feature guides users to relevant reading material, facilitating a comprehensive learning experience.

**THE
TECHNOLOGY
BEHIND
NEXTGENED**

QUICK DEMONSTRATION: STEP 1

User uploads image and clicks on 'Submit' button.

Directed to default query:
"What is the image about?
Explain the concept depicted in the image in detail."

User receives the AI output (text), Audio response and hyperlinks to related articles.

Welcome to NextGenEd! Here's how to get started:

- Upload an Image: Simply upload an image that you're curious about.
- Click 'Submit': After uploading the image, click the 'Submit' button to learn about the concepts depicted in the image.
- Review Information: You will receive information and explanations related to the image in both audio and text output.
- Ask Further Questions: If you have any further questions, use the audio input to ask and click 'Submit' again.
- Explore Related Articles: Scroll down the page and check out related articles to gain additional insights into your query.

Audio

Record

Default - Micropho...

Image

BUOYANT FORCE

The Buoyant Force = Weight of Displaced Fluid



Weight

Buoyant Force

Cork

Positively Buoyant

Weight

Buoyant Force

Wood

Positively Buoyant

Weight

Buoyant Force

Iron

Negatively Buoyant

Weight

Buoyant Force

Watermelon

Neutrally Buoyant

Clear

Submit

Speech to Text

What is the image about? Explain the concept depicted in the image in detail.

AI Output

The image is a diagram that explains the concept of buoyant force. It shows a scale model of a boat, with a weight on it, and a barometer to measure the pressure. The diagram also includes a scale model of a watermelon, which is used to illustrate the concept of buoyancy. The image explains that buoyant force is the upward force that opposes gravity and keeps the boat afloat. The diagram also shows that the buoyant force is proportional to the weight of the boat and the depth of the water. The image is a visual aid to help explain the concept of buoyant force to students or anyone interested in understanding the principles of buoyancy.

Audio Response



Related Articles

[What is buoyant force? \(article\) | Fluids | Khan Academy](#)

[14.6: Archimedes' Principle and Buoyancy - Physics LibreTexts](#)

[Chapter 9 - Fluids - Boston University](#)

[14.4 Archimedes' Principle and Buoyancy - OpenStax](#)

[27.6: Archimedes' Principle - Buoyant Force - Physics LibreTexts](#)

[Buoyancy & Archimedes' Principle - Isaac Physics](#)

[11.7: Archimedes' Principle - Physics LibreTexts](#)

[9-1 The Buoyant Force - Boston University](#)

[14.4 Archimedes' Principle and Buoyancy - University Physics Volume 1](#)

[The buoyant force - Boston University](#)

STEP 2

User submits another query through audio input.

Speech to Text displays the user's query: "Can you explain the concept of displaced liquid?"

User receives the AI output (text), Audio response and hyperlinks to related articles.

NextGenEd: Revolutionizing E-Learning

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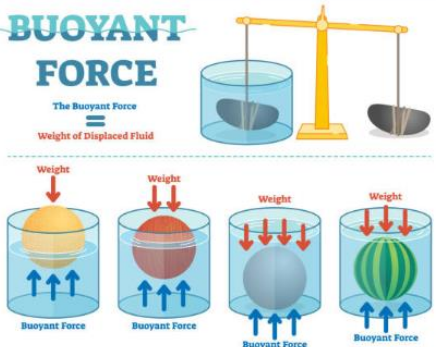
Audio

0:00 0:05

Image

BUOYANT FORCE

The Buoyant Force = Weight of Displaced Fluid



Positively Buoyant **Positively Buoyant** **Negatively Buoyant** **Neutrally Buoyant**

Speech to Text

Can you explain the concept of weight of displaced liquid?

AI Output

The concept of weight of displaced liquid is related to the buoyant force, which is a force that appears to defy gravity and lift objects off the ground. In the image, there is a graphic representation of the buoyant force, which is measured in units of weight. The buoyant force is determined by the weight of the displaced liquid, which is the volume of liquid that is displaced by the object being lifted. The weight of the displaced liquid is equal to the weight of the object being lifted, minus the weight of the liquid that is not displaced. This concept is important in understanding how objects can float or be lifted by the buoyant force.

Audio Response

0:00 0:43

Related Articles

- What is buoyant force? (article) | Fluids | Khan Academy
- Buoyant Force Equation: Step-by-Step Derivation
- 17.5: Archimedes' Principle and Buoyancy - Physics LibreTexts
- 9-1 The Buoyant Force - Boston University
- 14.4 Archimedes' Principle and Buoyancy - OpenStax
- Buoyant Force - Buoyancy Demonstration, Applications, FAQs - BIJU'S
- Chapter 9 - Fluids - Boston University
- Chapter 9 - Fluids
- 27.6: Archimedes' Principle - Buoyant Force - Physics LibreTexts

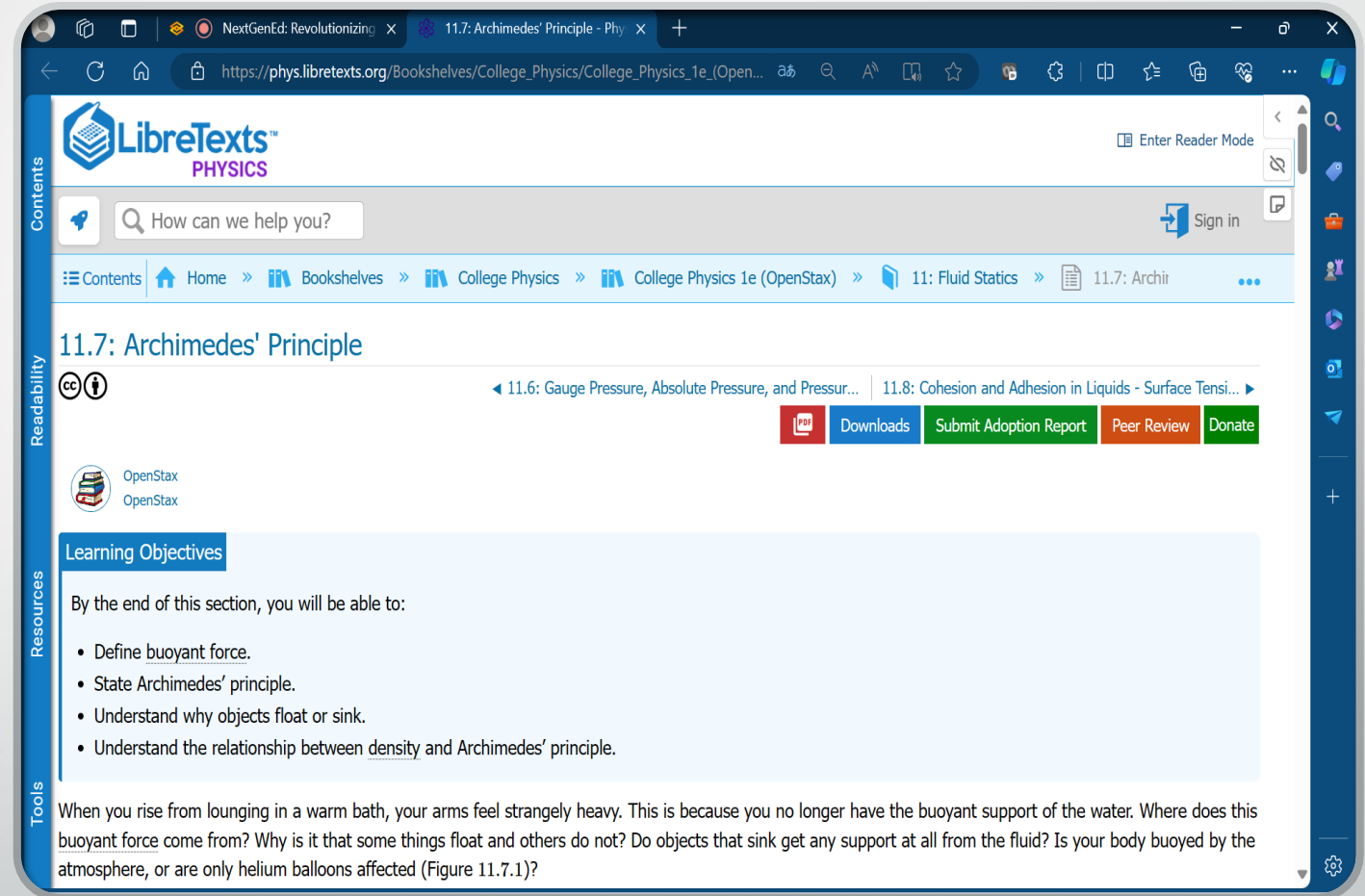
USER CAN CONTINUE ASKING MORE QUESTIONS.

EXPLORE RELATED ARTICLES

Deepening Knowledge:

Beyond providing initial insights, the app (LLaVA AI model) detects the main concept in the image and based on this concept, the app (through web search) presents a list of related articles. This functionality broadens the range of learning materials available, allowing users to delve deeper into their topics of interest and expand their understanding.

Each selected hyperlink opens the corresponding article in a new tab, facilitating an uninterrupted and deeper exploration of the topic.



VIDEO DEMONSTRATION

The screenshot shows a web browser window with two tabs. The active tab is titled "NextGenEd: Revolutionizing" and shows a URL "https://e805e20908b8541362.gradio.live". The page content is titled "NextGenEd: Revolutionizing E-Learning".

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The interface includes several input and action elements:


- Audio Input:** A section titled "Audio Input: Your question" with a "Record" button and a dropdown menu showing "Default - Micropho...".
- Image Upload:** A section titled "Image Upload" with a large area for dropping an image, a "Click to Upload" link, and icons for file selection.
- Speech to Text:** A section titled "Speech to Text: Your Question" with a text input field.
- AI Output:** A section titled "AI Output: Answer" with a text output field.
- Audio Response:** A section titled "Audio Response" with a large area for audio playback, indicated by a music note icon.

At the bottom of the interface, there are "Clear" and "Submit" buttons. The footer text reads "Use via API" and "Built with Gradio".

Educational Value: "Deepen your understanding of complex subjects through rich visual and textual analysis."



Accessibility: "Makes learning accessible to users with different needs, providing auditory and visual learning aids."

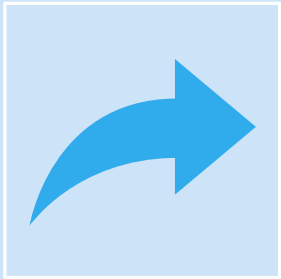


Engagement: "Interactive features keep users engaged and make learning a dynamic and active process."

BENEFITS OF USING NEXTGENED



Planned Features: "Looking ahead, we're excited to expand NextGenEd's capabilities with multilingual support to reach a global audience, integration with educational databases for enriched resources, and personalized learning pathways that adapt to individual user needs."



Feedback Loop: "Your insights drive our innovation. We are looking forward to continuously refine NextGenEd based on your feedback, ensuring that our solutions meet diverse educational demands and enhance user satisfaction."

FUTURE ENHANCEMENTS

**JOIN ON THE FOREFRONT OF
EDUCATIONAL TECHNOLOGY!**

THANK YOU!

**TRY
NEXTGENED
APP**