

# SPEAKEASY

A Guide to Augmentative and Alternative Communication

BAM 3034



Presented to:

Prof. Parth Dave

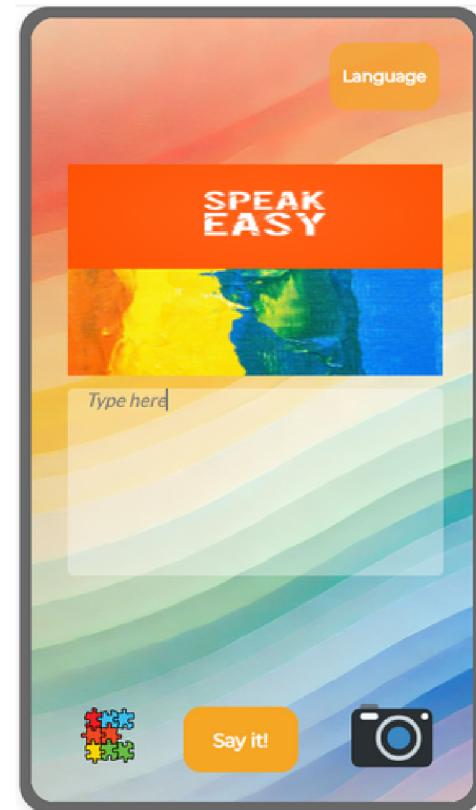
Date: August 3, 2024

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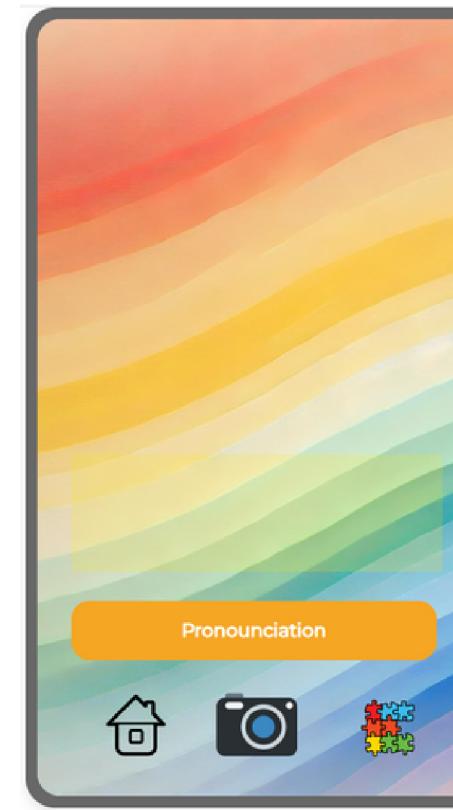
# SPEAKEASY

## APP Overview



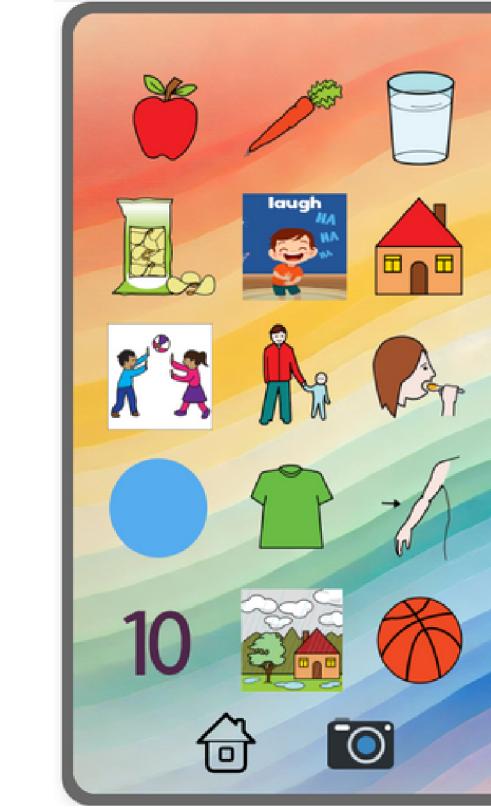
### Home Screen

- Text-to-Speech
- Translates to 5 different languages



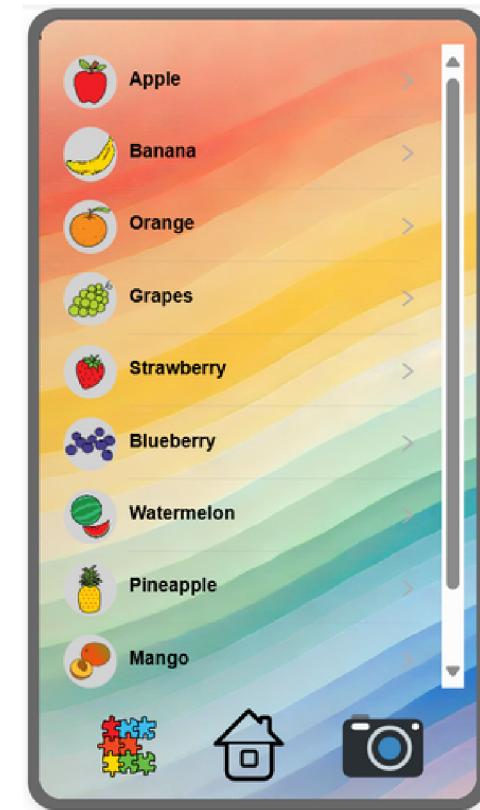
### Camera

- Image Recognition
- Image Description



### Category

- Image -to-Speech
- Pre-loaded images



### Item List

- Image -to-Speech
- Pre-loaded images



### Languages

- Supported Languages

Access SpeakEasy App via link: [https://thunkable.site/w/hZfn\\_gX1miVXd1i58ORpN](https://thunkable.site/w/hZfn_gX1miVXd1i58ORpN)

# BUSINESS PROBLEM

## Enhancing Communication Tools for Non-Verbal Children

### Context

Non-verbal children face significant challenges in expressing their needs and forming relationships due to their inability to communicate verbally. Existing communication aids, such as AAC (Augmentative and Alternative Communication) devices, are often limited in functionality, primarily offering preset images for image-to-voice output. These limitations restrict the children's ability to communicate dynamically and contextually, hindering their overall development and integration into society.

### Challenge

Current AAC software and tools primarily focus on preset images for image-to-voice output, lacking advanced features such as real-time image recognition, multi-language support, and comprehensive text-to-speech capabilities. These limitations prevent non-verbal children from fully utilizing these tools to express themselves, limiting their ability to communicate effectively in different contexts and languages.

### Objective

Develop an innovative and affordable AAC application with advanced features that address the limitations of existing tools. The new application should include;

- Text-to-Speech Output
- Image Recognition and Description
- Language Translation
- Pre-loaded Images for Speech Output
- Multilingual Availability

# FINANCIAL VIABILITY

## Freemium Model

- Free Basic Version: Offer a free version of the app with essential features like basic text-to-speech and a limited library of pre-loaded images.
- Premium Subscription: Introduce a subscription plan that unlocks advanced features such as image recognition, language translation, and an extensive library of images. Monthly or annual subscription fees can provide a steady revenue stream.

## In-App Purchases

- Additional Language Packs: Sell additional language packs or specialized vocabularies as in-app purchases. For example, medical or educational terminology packs can be offered at a premium.
- Image Libraries: Offer themed image libraries (e.g., school, home, travel) for purchase, allowing users to customize their communication experience.

## Partnerships

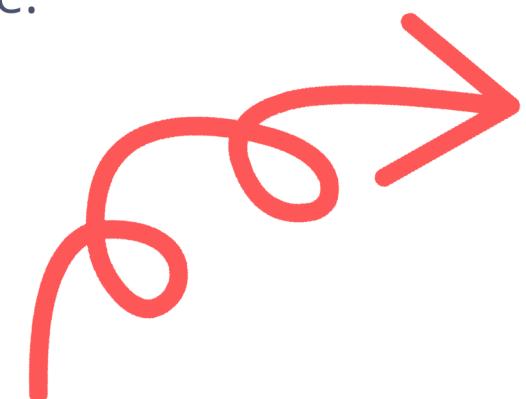
- Educational Institutions: Partner with schools and special education programs to integrate the app into their curriculum. Offer bulk licensing agreements or educational discounts to institutions.
- Healthcare Providers: Collaborate with hospitals, speech therapists, and occupational therapists to promote the app as a tool for therapy and communication. Sponsorship deals with healthcare providers can offset development costs and provide promotional benefits.



# FUTURE WORKS & ENHANCEMENT

## Advanced Speech Recognition

- Voice Input to Text: Implement advanced speech recognition technology that allows users to speak into the device and have their words converted to text. This feature can be useful for users who have some verbal ability but struggle with clear speech.
- Personalized Voice Output: Develop technology that allows users to record their own voice or use a family member's voice for the text-to-speech output, providing a more personalized and comforting experience.



## AI Powered Predictive Text and Image Suggestions

- Predictive Text: Utilize AI to predict and suggest words or phrases as the user types, speeding up communication and making the app more intuitive.
- Image Suggestions: Implement machine learning algorithms to suggest relevant images based on the user's recent communication patterns and context.

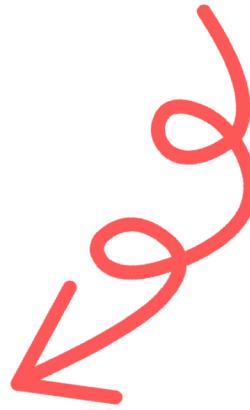
## Augmented Reality (AR) Features

- AR Object Recognition: Incorporate augmented reality to enhance the image recognition feature, allowing users to point their device at objects to receive real-time descriptive feedback and contextual information.
- Interactive Learning: Develop AR-based interactive learning modules that can teach users new words and phrases by overlaying information on real-world objects.

## Gamification

- Educational Games: Introduce educational games that reinforce language learning and communication skills. Games can reward users with points or badges, encouraging continuous use and engagement.
- Progress Tracking: Implement a feature that tracks the user's progress and provides insights into their development. Caregivers can receive reports on the user's communication patterns and milestones.

# RESOURCES



APP Link: [https://thunkable.site/w/hZfn\\_gX1miVXd1i58ORpN](https://thunkable.site/w/hZfn_gX1miVXd1i58ORpN)

Github Repo: <https://github.com/malditagithub/SpeakEasy>

Raw Files:

[https://drive.google.com/drive/folders/1tMROouJzA2qZrBMoanpPndTZag27NQ  
YS?usp=drive\\_link](https://drive.google.com/drive/folders/1tMROouJzA2qZrBMoanpPndTZag27NQYS?usp=drive_link)

Images:

[https://console.cloudinary.com/console/c-  
2407033fe3d54d45ca4bb0723d2c8f/media\\_library/folders/home?  
view\\_mode=mosaic](https://console.cloudinary.com/console/c-2407033fe3d54d45ca4bb0723d2c8f/media_library/folders/home?view_mode=mosaic)



THANK YOU!