



WordBuds Preliminary Project Presentation

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General Motivation

For Parents

Goal:

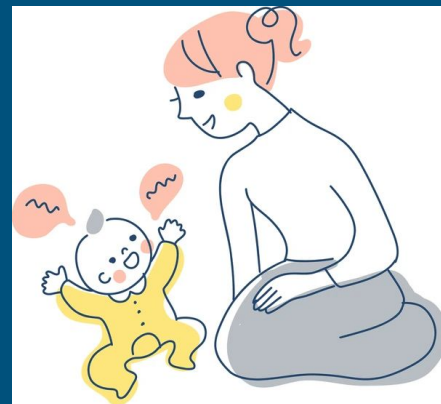
- Develop an app to provide parents with a multimodal and multilingual platform for tracking their child's linguistic progress

Intended User:

- Parents of children ages 6 - 24 months

Importance:

- Centralized location for logging child's speech
- Analysis of frequency and content of child's vocabulary-building
- Statistical comparison to linguistic norms for child's age range
- Potential ad-hoc diagnostics



General Motivation

For Researchers

Goal:

- Develop a user-friendly app for linguistic researchers to access collected data in the database

Importance:

- Collection of child linguistic data for research, as there are not data sets available for this purpose currently



Core Features



Goal: An app that helps parents track their child's language development

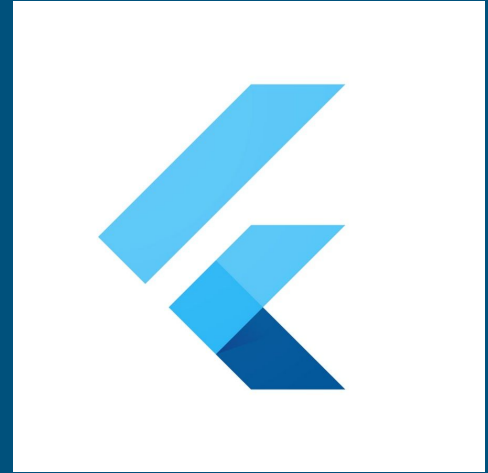
- daily language tracking: words entered by parents with a photo/video/audio memento
- entries are automatically categorized (noun, verb, etc.)
- Ability to edit and review past logs
- Send push notifications to encourage consistent data entry

Core Features: insights and data

- Analytics categorized by time period (day, week, month, etc.)
- Compare a child's language development to the norm for their age
 - e.g. only 5% of children use this word at this age
- Designed for IRB compliant child language data collection
- Secure data storage through firebase

Technical Details

- Mobile App
 - Flutter framework
- Admin/Researcher Dashboard
 - Website - Same codebase
- iOS, Android
 - Currently only deployed on iOS devices
 - Active on TestFlight
- Data storage
 - Firebase
 - Audio/videos stored locally



Initial Thoughts on Development Environment

- VS Code
 - Using Flutter framework
 - Cross platform
- Github
 - Version control
- Existing project in Firebase
- Google Docs for sprint planning

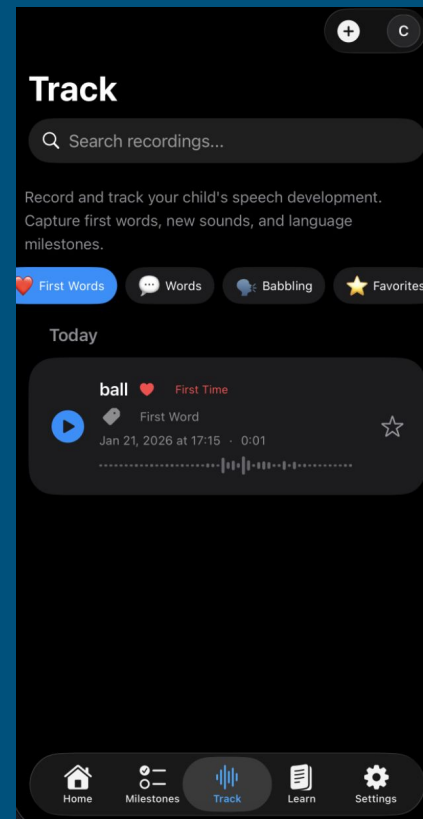
Competitors

Baby Talk

- Only very rudimentary analytics
- Features locked behind paywall
- No regard for linguistic principles
- Local data only

Baby Word Tracker App

- Developed by Oxford Brookes University
- No analytics
- Poor ratings



Challenges/Obstacles

Data Privacy and Compliance

- Secure storage/handling of audio/video has strict privacy protections
- IRB (Institutional Review Board) requirements for research involving children

Working with existing codebase

Technical Limitations

- Speech-to-text models often produce poor results for children's speech
- Child speech datasets are scarce