

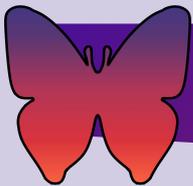
# Team Shining Sky

## ARORA Community Mentor Portal

Team: Rosze Voronin, Skyler Hanson, Ashleea Holloway, Logan O'Donnell

Mentor: Felicity Escarzaga

Sponsor: Dr. Morgan Vigil-Hayes



# Introduction

- Rural location of many Indigenous communities limits access to mental health services.
- 26.6% of Indigenous people in America live in poverty.
- Indigenous people in America report feeling psychological distress 2.5 times more than the general population per month.

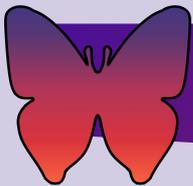
## Key findings

<https://www.cdc.gov/nchs/products/databriefs/db419.htm>

### Data from the National Health Interview Survey

- In 2020, 20.3% of adults had received any mental health treatment in the past 12 months, including 16.5% who had taken prescription medication for their mental health and 10.1% who received counseling or therapy from a mental health professional.

- Indigenous youth have the highest suicide rate of any group in the US.
- Youth risk factors: poverty, violence, substance abuse, trauma, trafficking, homelessness, high rates of anxiety and depression.

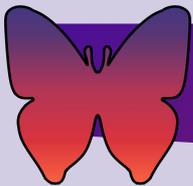


# Our Client

## Dr. Vigil-Hayes and CANIS Lab:

- Research lab at NAU's SICCS department
- Specialize in R&D of community-centered information systems, low-connectivity networks, and working to meet the network needs of low-access communities
- Currently working on the ARORA Project to address lack of mental healthcare for young people on the Hopi reservation





# Problem Statement

## ARORA Project

Youth mental wellness app developed by CANIS Lab for Hopi reservation.

## Hopi Community Mentorship Program

Peer mentorship program working with CANIS to get access to ARORA project userbase and resources.

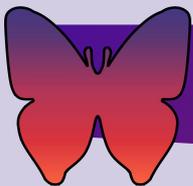
???

## Issues

No guidance for young users.  
Mood reports are only for self-tracking.  
Project could be more effective if expanded.

## Issues

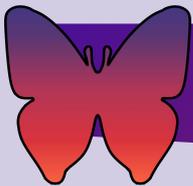
No connection to users.  
Could use a way to deliver resources and other help to users.  
No software to support the program.



# Solution Overview

## Solution Specification:

- Mobile app support for the Hopi Community Mentorship Program that CANIS Lab is looking for
- Will allow mentors to manage their work and connect with mentees
- Designed to be a self-contained starting point to establish a platform for future development
- Focuses on functionality and usability currently
- CANIS Lab is expecting a \$2.5 million grant in July to fund further development
- Further development will focus on low-connectivity network code and integration



# Key Requirements

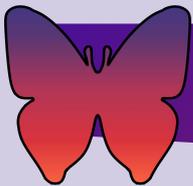
Question Feed

Calendar Window

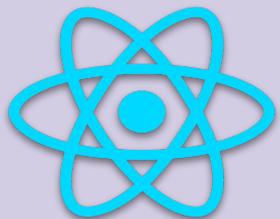
Authority Levels

Chat Window

User Lists

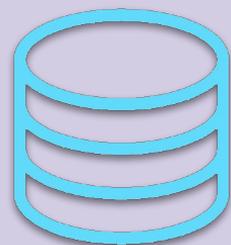


# Frameworks and Packages



**React Native**  
*development framework*

- Platform Support
- Large Community
- Existing Packages



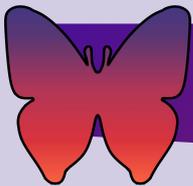
**Async Storage**  
*data storage*

- Platform Support
- Utilize local storage with React

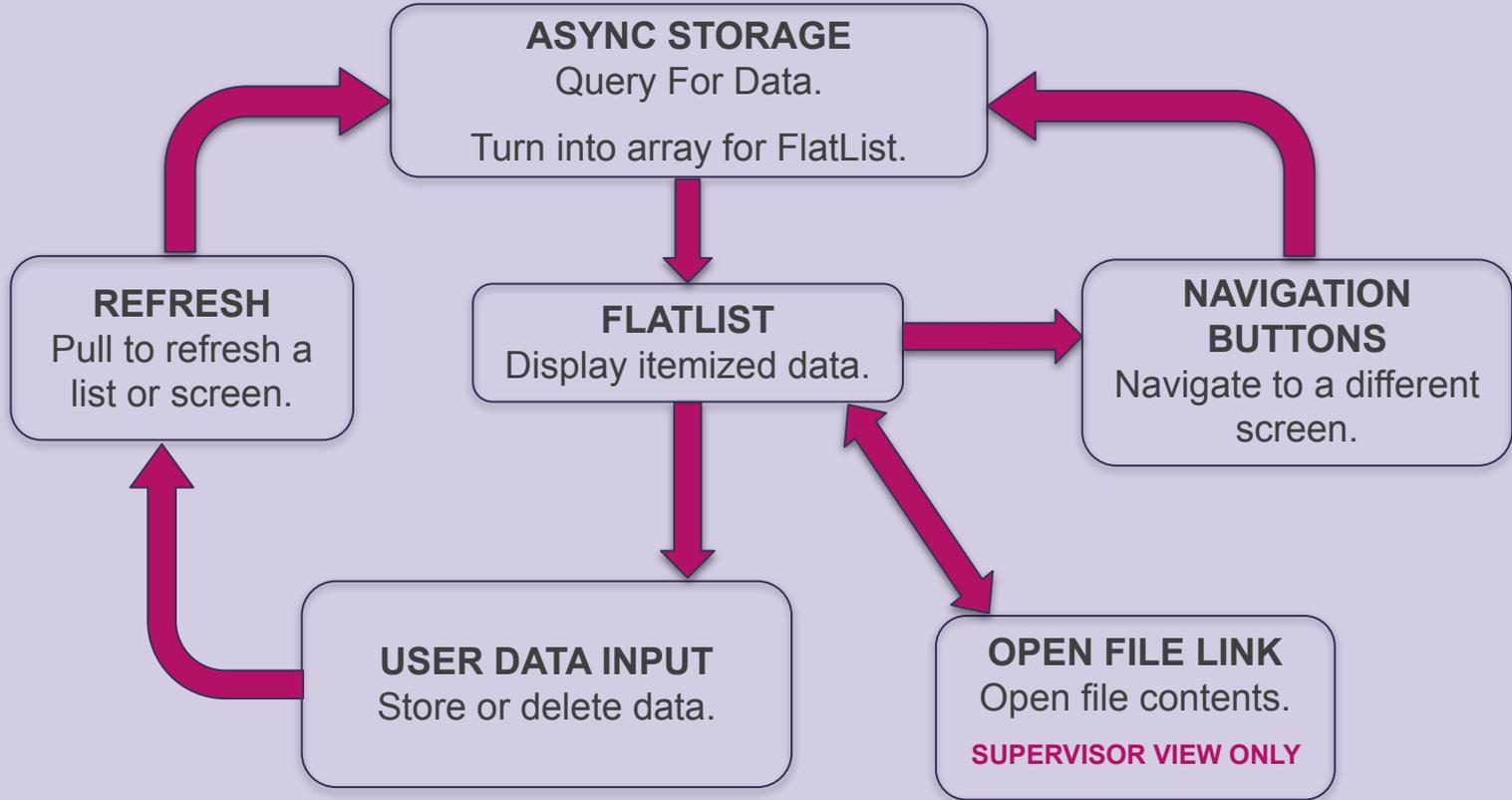


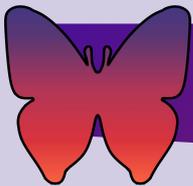
**Expo**  
*deployment framework*

- Platform Support
- Designed for React Native

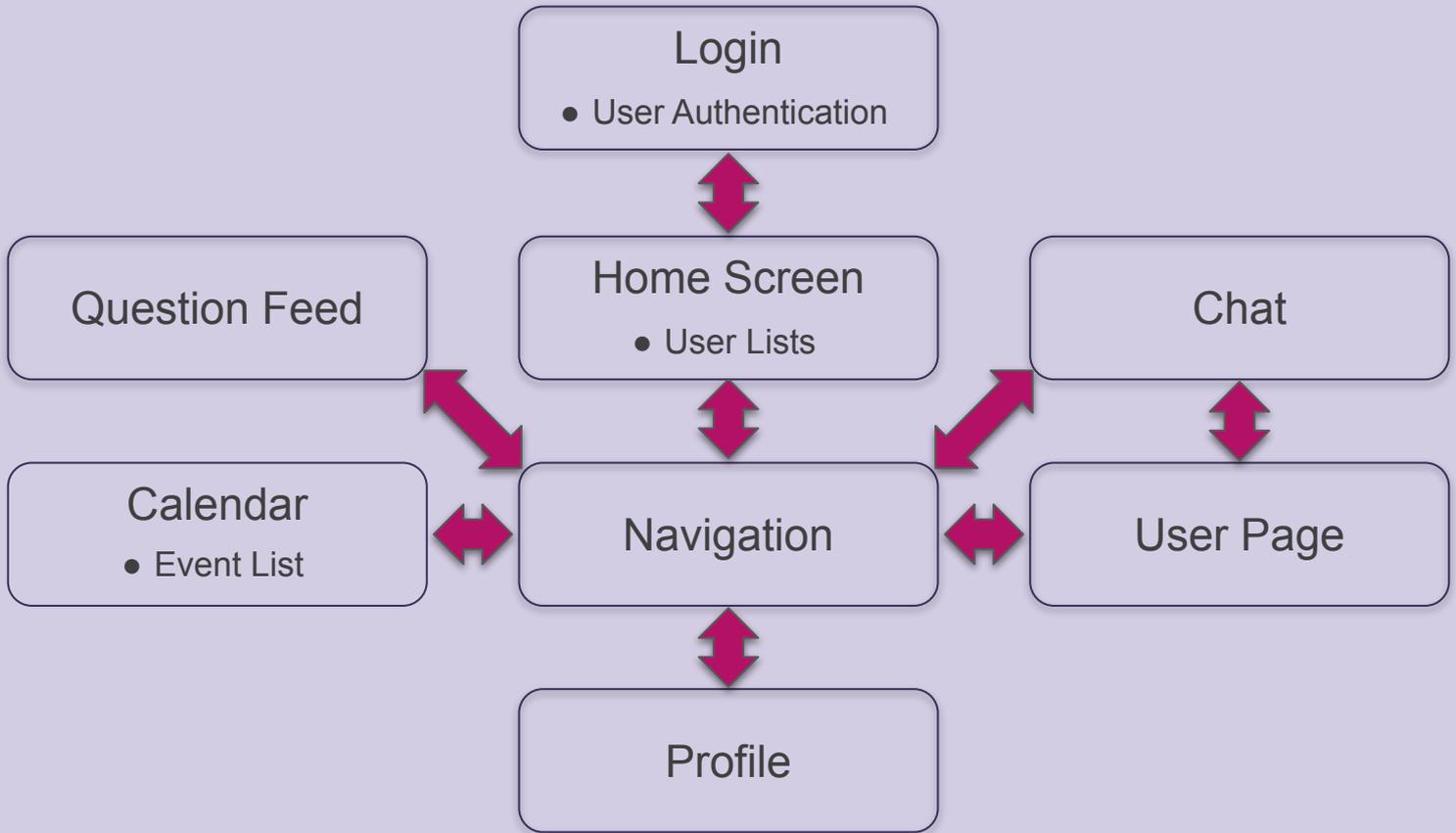


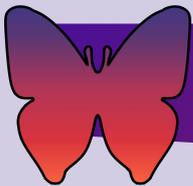
# Back End Implementation





# Front End Implementation





# Prototype

## Admin User

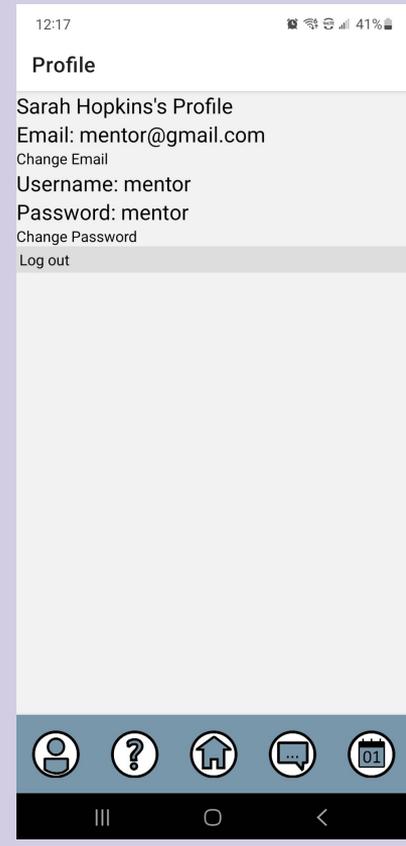
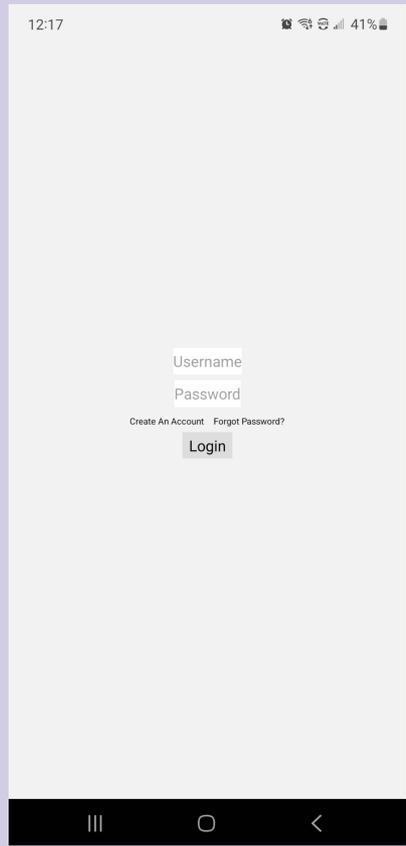
Unique utility user of the app  
Gives ability to create supervisors.

## Supervisor User

Secondary user of the app.  
In charge of mentors.

## Mentor User

Main user of the app.  
Direct communication with mentees.





# Mentor View

12:24 39%

## Home

Welcome, Sarah Hopkins  
Your Mentees

Search

- John Smith
- Jane Doe
- Adam Sandler
- Paige Peach

Bottom navigation: Profile, Help, Home, Chat, Calendar

12:25 39%

## John Smith

Chat Calendar Add Flag

Current Risk:

Search

- Date: 08/24/2001  
Mood: Happy  
Stress Level: Low
- Date: 08/25/2001  
Mood: Neutral  
Stress Level: Medium
- Date: 08/26/2001  
Mood: Neutral  
Stress Level: Low

Bottom navigation: Profile, Help, Home, Chat, Calendar

12:25 39%

## Chat

### Your Chats

Search

- John Smith
- Jane Doe
- Adam Sandler
- Paige Peach

Bottom navigation: Profile, Help, Home, Chat, Calendar

1:05 37%

## John Smith

Apr 8, 2022

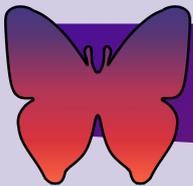
**TU** Thanks for all your help.  
12:20 PM

New room created.

**No problem!**  
1:05 PM

Type a message...

Bottom navigation: Profile, Help, Home, Chat, Calendar



# Mentor View

12:25

### Questions

Search

1/23/2022  
How do I eliminate stress in my life?  
Flagged!  
Responses:  
mentor: You can reduce stress by changing your diet!  
supervisor: I'll contact you shortly!

Type a response...  
**SUBMIT**

1/24/2022  
How do I improve my moods?  
Responses:  
mentor: Set aside time for a hobby!

Type a response...  
**SUBMIT**

1/25/2022  
How I keep my depression from taking over my life?

Navigation icons: Profile, Help, Home, Chat, Calendar

12:26

### Calendar

Date  
Fri Apr 08 2022  
Time  
12:25 PM  
Meeting with Adam Sandler.

**SUBMIT**

Fri Apr 08 2022  
12:25 PM  
Meeting with Adam Sandler.

**EDIT**  
**DELETE**

Navigation icons: Profile, Help, Home, Chat, Calendar

12:25

### Calendar

Date  
Fri Apr 08 2022  
Time  
12:25 PM  
Description

2022  
Fri, Apr 8

< April 2022 >

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

**CANCEL** **OK**

Navigation icons: Profile, Help, Home, Chat, Calendar

12:25

### Calendar

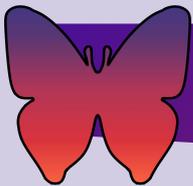
Date  
Fri Apr 08 2022  
Time  
12:25 PM  
Description

**SUBMIT**

12:25

**CANCEL** **OK**

Navigation icons: Profile, Help, Home, Chat, Calendar



# Supervisor View Differences

12:26 39%

## Supervisor Home

Welcome, Andy Jenkins

Your Mentors

Search

Sarah Hopkins

Bottom navigation: Home, Profile, Search, Messages, Calendar

12:27 39%

## Sarah Hopkins

Search

- John Smith
- Jane Doe
- Adam Sandler
- Paige Peach

Bottom navigation: Home, Profile, Search, Messages, Calendar

12:27 39%

## Supervisor Questions

Search

1/23/2022  
How do I eliminate stress in my life?  
Flagged!

Responses:

mentor: You can reduce stress by changing your diet!

supervisor: I'll contact you shortly!

Type a response...  
SUBMIT

1/24/2022  
How do I improve my moods?  
Flagged!

Responses:

mentor: Set aside time for a hobby!

Type a response...  
SUBMIT

Bottom navigation: Home, Profile, Search, Messages, Calendar

12:27 39%

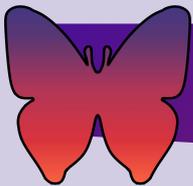
## Sarah Hopkins

Mentor: Sarah Hopkins  
Mentee: John Smith

New room created.

Thanks for all your help.

Bottom navigation: Home, Profile, Search, Messages, Calendar



# Challenges and Resolutions

## Data Storage

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### **Challenge**

Local storage

CANIS in charge of remote storage

### **Resolution**

~~MySQL with node.js~~

~~SQLite~~

Async Storage

## Refresh

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### **Challenge**

Show updated data

Refresh screen or element

### **Resolution**

React Native Flatlist Usage

Implementing pull to refresh

## Platform

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### **Challenge**

Different platforms need different system calls.

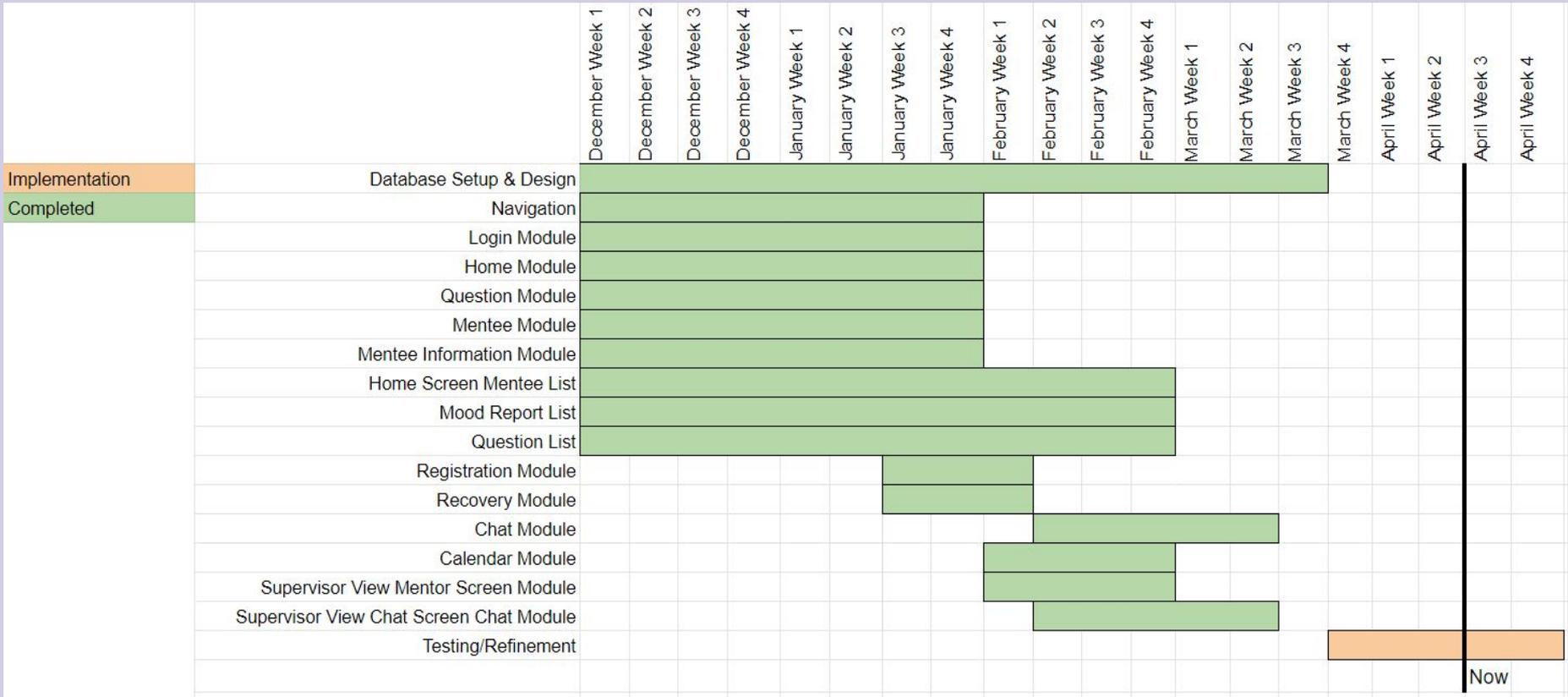
### **Resolution**

Using Android for now

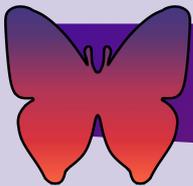
Thorough documentation on necessary changes for later export to web and iOS



# Schedule



Now



# Unit and Integration Testing

Login

- Username
- Password
- Authentication

Home Screen

- Information
- Navigation

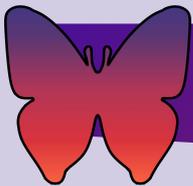
Login



Home Screen



Mentor Screen



# Testing Plan

## ▶ Sample Users

Send a message to John Doe.

Add an event in the calendar.

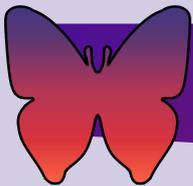
## ▶ Expert Review

- Simple Tasks
- Open-ended Questions
- Using the Feedback

## ▶ Real Users

 Adam Sandler 
 Paige Peach 

 John Smith 
 Jane Doe 
 Adam Sandler 
 Paige Peach 



# Future Work and Conclusion

- Team Shining Sky is working with CANIS Lab to address mental health among Hopi youth with the ARORA Community Mentor Portal app
- We developed a strong platform for future development to our client's specification
- Currently testing, tweaking, and preparing for final handoff
- CANIS Lab is expecting a \$2.5 million grant for further development focusing on network code and plans to expand ARORA in the future
- Thanks to CANIS Lab for working with us, and thank you for listening