



ARORA Community Mentor Portal App



Team Shining Sky:

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Client:

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Mentor:

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MOTIVATION

The National Center for Health Statistics reports that, in 2020, 20.3% of adults received some form of mental health treatment. While people living in urban areas may take easy access to mental healthcare for granted, rural locations like reservations and tribal communities have much more limited access.

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

CANIS Lab has been working with the Hopi community to address the youth mental health crisis on the Hopi reservation. As part of the ARORA project, they developed a mobile app where young people can track their moods over time and access mental wellness exercises as well as other resources. Hopi community members are also working on a peer mentorship program, connecting young people with their older peers in order to provide them with advice and resources regarding their mental health. This mentorship program would benefit from software support to help it keep organized and deliver resources to users, while the ARORA project would benefit from more guidance for its young users and an expansion of what resources can be offered. A bridge between the ARORA app and the Hopi mentorship project is the clear solution to these deficiencies, and Dr. Vigil-Hayes brought on the members of Shining Sky to develop the first version of that solution.

SOLUTION OVERVIEW

The ARORA Community Mentor Portal App is designed to be the first iteration of the bridge between the ARORA project and the Hopi peer mentorship program. Shining Sky developed a solid platform for CANIS Lab's future development, focusing on features and usability so that CANIS lab could work on network code suited to the low-connectivity area the app is intended for use in (one of their specialties) and extend the existing ARORA project to accommodate the additional app. The app provides a set of features aimed at supporting the day-to-day activities of the Hopi peer mentorship program, allowing mentors to effectively advise their young mentees.

Features:

- Mentors from the Hopi peer mentorship program can view information about mentees assigned to them, including mood reports pulled from the ARORA app.
- Mentors can answer anonymous questions sent in by mentees from the program.
- Mentors can chat with their assigned mentees via a texting-style interface.
- Mentors can utilize a calendar to keep track of their commitments related to the program.
- Supervisors, using a special account type, can monitor mentor activity and chat logs, as well as see mentees and questions that mentors flagged as needing special attention.

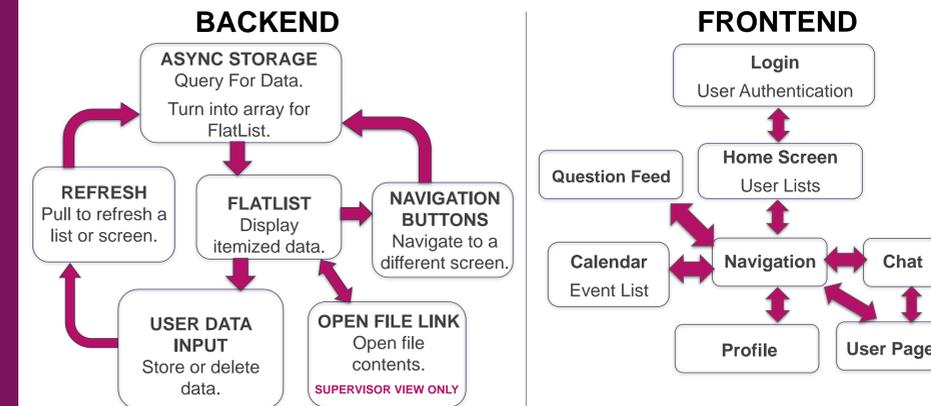
Young people on the Hopi reservation struggle with a lack of access to mental healthcare.

Our app provides needed software support for an upcoming Hopi community mentorship program.

Visit the Project Website:
<https://ceias.nau.edu/capstone/projects/CS/2022/ShiningSky>



ARCHITECTURE

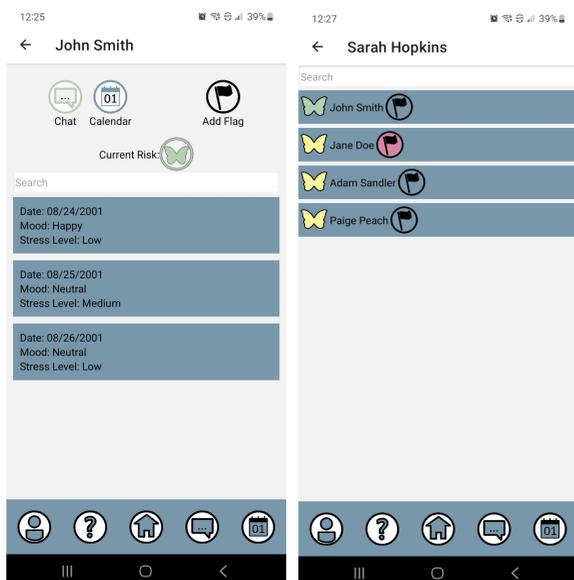


CHALLENGES

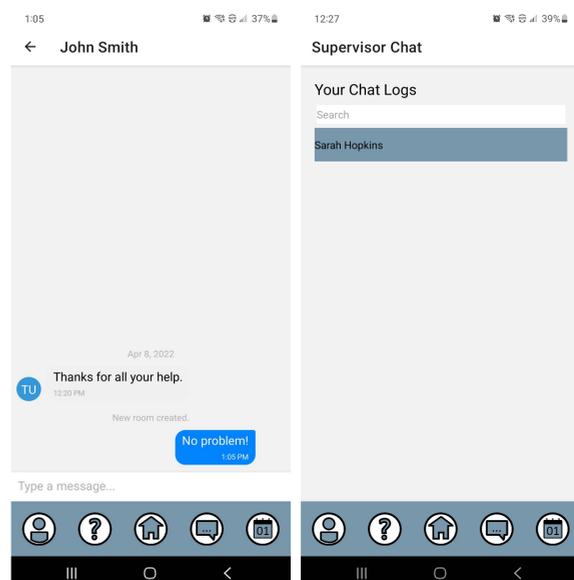
| Data Storage | Refresh | Platform |
|--|---|--|
| <p>Challenge</p> <p>Local data storage (CANIS Lab in charge of remote storage)</p> <p>Resolution</p> <p>Tried MySQL with node.js Tried SQLite Settled on Async Storage</p> | <p>Challenge</p> <p>Show updated data when changes are made Live refresh of screens and other elements</p> <p>Resolution</p> <p>Use React Native Flatlist Implementation of pull to refresh</p> | <p>Challenge</p> <p>Different platforms need different system calls</p> <p>Resolution</p> <p>App is Android only for now Thorough documentation on necessary changes for later export to web and iOS</p> |

SCREENSHOT HIGHLIGHTS

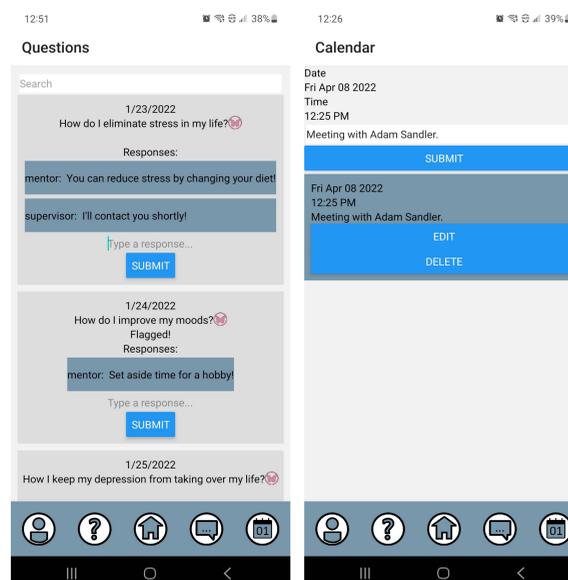
Mentor's mentee info view (left) and the supervisor screen allowing access to the same information for Sarah Hopkins' mentees (right).



Mentor's chat screen view (left) and the supervisor screen allowing access to chat logs for monitoring (right).



Question screen (left) and calendar screen (right) which look roughly the same for both mentors and supervisors.



OUTCOME AND FUTURE DEVELOPMENT

Project Outcome:

The ARORA Community Mentor Portal app serves as an important milestone in the continued success of the ARORA project. It provides all the features and functionalities needed to support the Hopi peer mentorship program, furthering the goal of providing better access to mental healthcare for young people on the Hopi reservation. Once CANIS Lab completes the second stage of development, the app will be integrated with the rest of the ARORA project, allowing both the peer mentorship program and the ARORA youth mental wellness app to function more effectively in tandem.

Further Development:

Dr. Vigil-Hayes was able to use the prototype of the Community Mentor Portal app to apply for a \$2.5 million grant, which she expects to see the results of in July 2022. After obtaining funding, she plans to continue development on the Community Mentor Portal app through CANIS Lab. This future development will focus on low-connectivity network code to allow the app to function smoothly in areas with poor internet access like the Hopi reservation. This type of network code is one of CANIS' specialties as a research lab, so being able to focus on that will allow them to use grant money more efficiently. In addition, CANIS will integrate the Community Mentor Portal app with the rest of the ARORA project, allowing users of the existing youth mental wellness app and users from the mentorship program to interact more effectively.

Future of the ARORA Project:

Once the ARORA project has been expanded to suit the needs of the Hopi reservation, Dr. Vigil-Hayes plans to offer a genericized version of it to other Indigenous communities in North America. Through this, she hopes to address the mental healthcare gap faced by North American indigenous communities and move towards a future in which everyone has the access to mental healthcare that they need.