Names: Nathaniel Bevins, Caroline Pirtle

GPS Time Converter:

Mobile application to convert times between Coordinated Universal Time (UTC). and Global Positioning System Time (GPS). UTC is the primary time standard used to regulate time globally starting on Jan 1, 1960. UTC occasionally adds leap seconds to adjust the calibration between the 24 hour system to the rotation of the Earth, currently 18 leap seconds have been added. GPS time is the number of seconds since Jan 6, 1980 0:0:0, ignoring leap seconds. Therefore, an algorithm for converting between these times must account for the number of leap seconds affecting a certain time, make the necessary adjustments, and then convert. There is a text input so the user can convert a time of their choosing, which takes the string and uses state to update the values. For the random time, a random date generator API was used to grab a random date and uses the same conversion as the user imputed time. An icon of a satellite was also added to make the app more appealing, as well as the colors.

Work Breakdown:

Nathaniel - Algorithm to convert between UTC ↔ GPS times, Functionality to switch between conversion directions (UTC ↔ GPS to GPS ↔ UTC and back)
Caroline - UI design and input handling for the mobile application with React Native, API Functionality

Git Repository: https://github.com/CarolinePirtle/Project-3
* Note that the Angular project is still present in the repo, but the gps-app-native is the correct folder. We choose to keep the Angular folder due to the experience gained making the project.
Application Link: https://expo.dev/accounts/nathaniel-bevins/projects/gps-converter