NAV SB
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THE PROBLEM

Finding an easy, accessible, and interactive way to navigate UCSB campus

In search of a new and exciting way to showcase the UCSB campus

Target Audience: students and visitors
ALREADY EXISTING SOLUTIONS

GO GAUCHO APP
“TO ENHANCE THE UCSB CAMPUS EXPERIENCE THROUGH BETTER NAVIGATION AND MORE INFORMATION”
OUR SOLUTION

- iOS application that implements:
  - Interactive Map
  - Navigation using Augmented Reality
TECHNOLOGIES USED
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• Xcode
  • IDE for iOS application development

• Swift
  • Apple’s native programming language

• C++
  • Database to collect and store information
mapbox

- Software Development Kit for building maps
- Allows for rich features like
  - Customizable maps
  - Turn by Turn navigation
ARCL

Combines Apple’s native frameworks, ArKit and CoreLocation

**ArKit:**
- Uses camera and motion data to map out the local world as you move around

**CoreLocation:**
- Uses wifi and GPS data to determine your global location

**ARCL:**
- Combines high accuracy of AR with the scale of GPS data
OUR FEATURES
OPENING THE APP
INTERACTIVE MAP
USING THE SEARCH BAR
INTERACTIVE FEATURE

The Marine Science Institute is housed in the picturesque Marine Science Research Building (MSRB) on the UCSB campus overlooking the Santa Barbara Channel.
LONG PRESS FOR DESTINATION
VIEWS
AUGMENTED REALITY NAVIGATION

• Allows user to navigate around campus using augmented reality navigation lines and pinpoints on significant areas and buildings

• Useful for confused freshman and visiting students and/or families
FUTURE DIRECTIONS

- Data scraping tool using C++
- Use machine learning to recognize building for more accurate AR navigation
- Make the node designs in AR feature better
- UI/UX