

# The Mars Archive

## The Salty Farmers: Vengeance

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# Our Goals

- Solve the problem statement by creating a unique visual experience that can be accessed from any device
- Leverage additional data sources for an additional feature: 3D Mars / Rover Models
- Cache data whenever possible



# Our Solution

Two components -> One single, consistent experience across platforms:

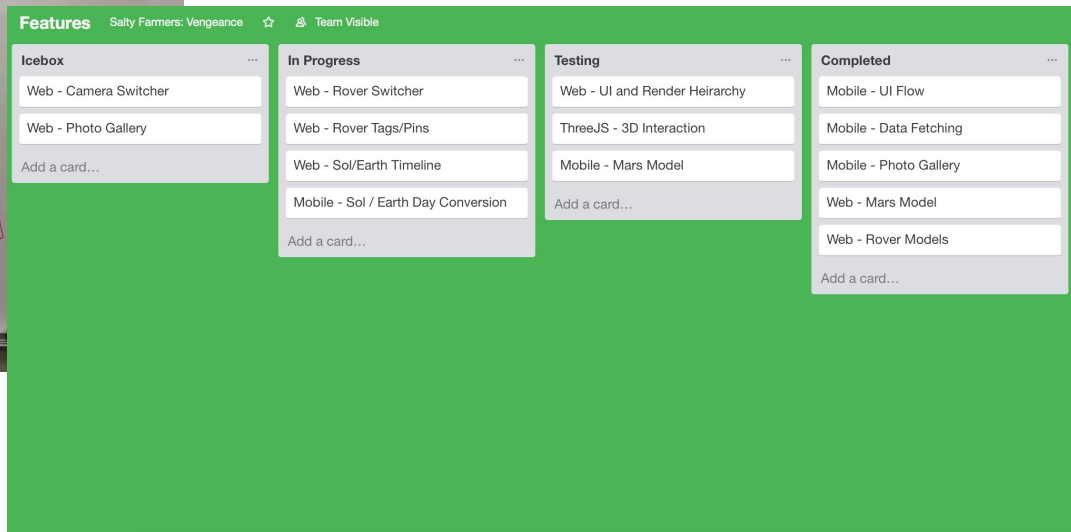
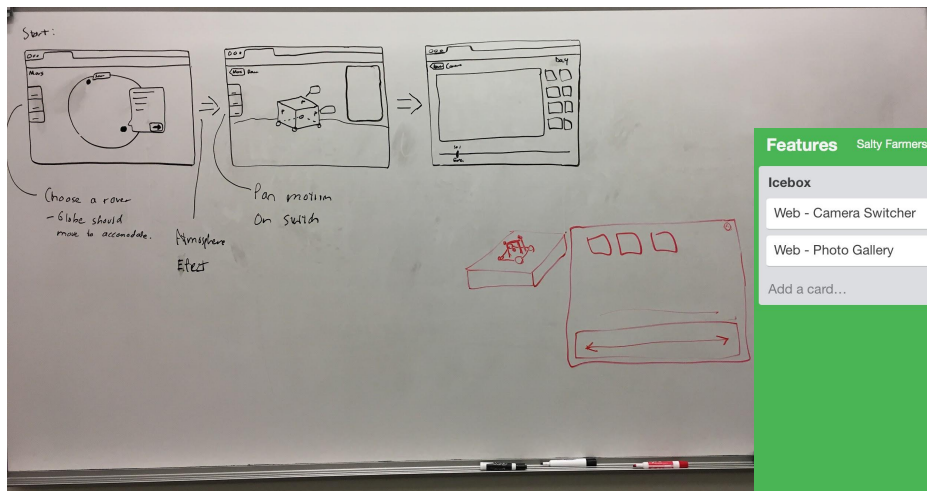
- Web Application: Built in Node.js, leverages Three.js library for 3D modeling of Mars and Rovers
- Mobile Application: Built in Swift, a native iOS App that takes advantage of iOS 10's Scene Kit for Mars model



# Planning / Teamwork



Tools Used: Gitlab Team, Trello, all with integrations into Slack Team



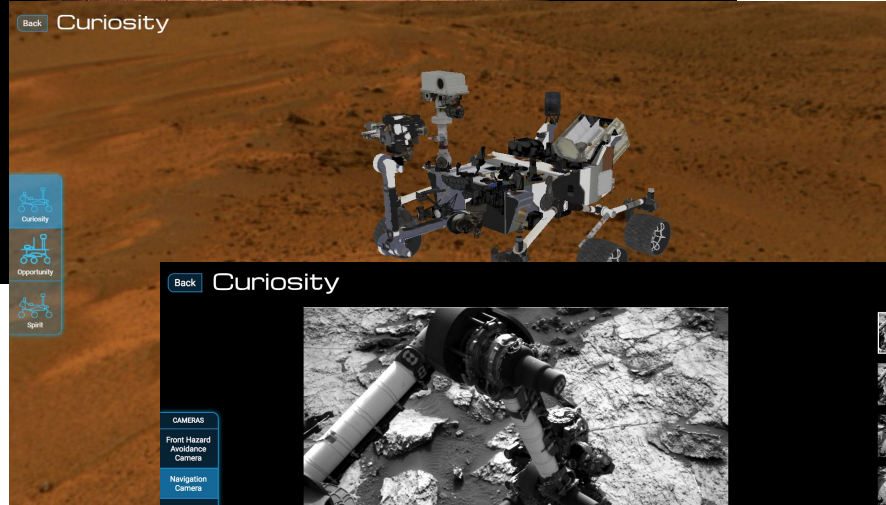
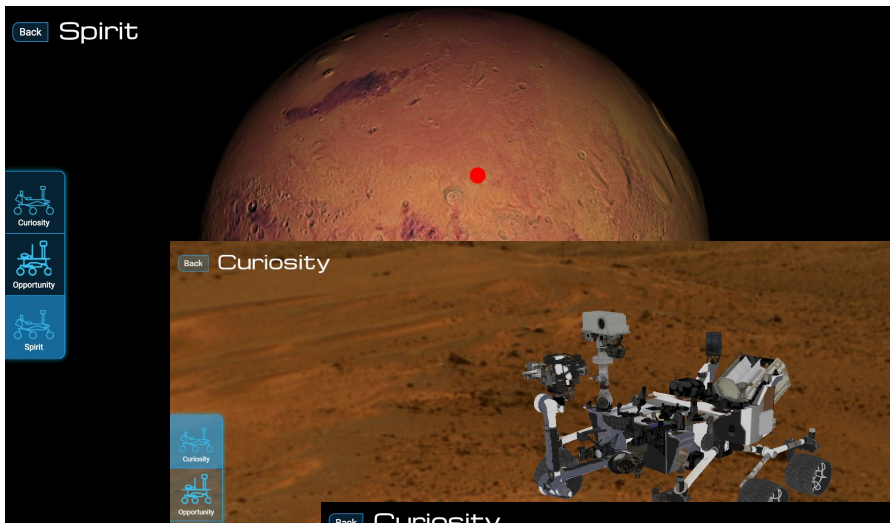
# Efficiency Strategies

Under the pressure of time, we came up with a few ground rules to guarantee MAXIMUM team efficiency:

- No fluids = No bathroom breaks = More overall coding time
- Two 1-hour napping breaks allowed
- Only instrumental music (lyrics are distracting)
- No outside contact, not even your mother

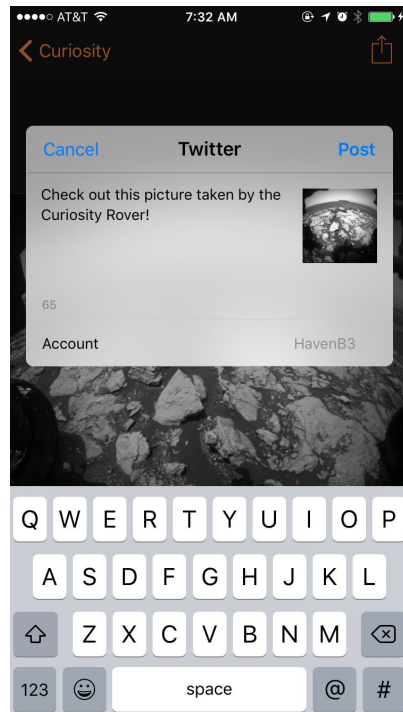
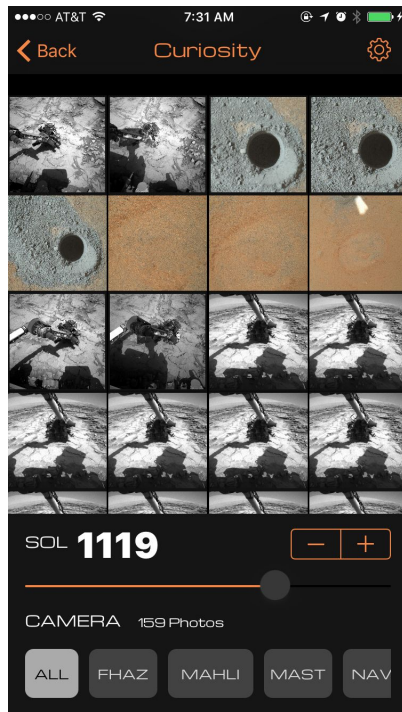
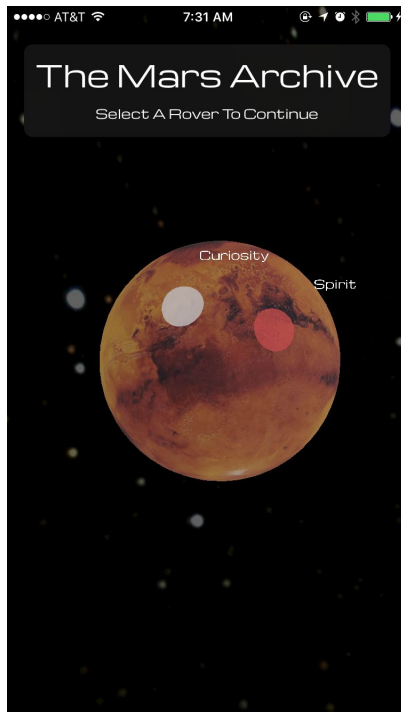
# The Web App

- Built on Vue.js and Vuex for state management
- Used Three.js for 3D Rendering of Mars and Rovers
- Used Proxy Server to get around CORS



# The iOS App

- 3D Physics-based Mars Model using SceneKit
- Image Caching
- Intuitive Filtering / Day Selection Options
- Full Screen Gallery w/ Zoom
- Share Actions



# Difficulties Faced

- CORS
- API Limitations
- Frameworks
- 3D Modeling / Global Positioning
- Ever-expanding project requirements

