Dashboard for a Solar-Electric Vehicle

Overview
The project is a user interface for an electric vehicle that displays vehicle information such as speed, battery charge, etc.

Project Description
The vehicle in question is *Helia*, a 4-seater solar-electric vehicle built by Cambridge University Eco Racing (www.cuer.co.uk). Information concerning the battery status (current draw, charge remaining, voltage, and any faults) as well as general vehicle telemetry (vehicle speed, lights status, current drive mode, etc.) needs to be displayed prominently in a centre console. The idea is to have a Tesla-style tablet mounted in the centre of the dashboard that will have all of this information presented in an attractive way, perhaps having different views for different sets of information (e.g. one that is a general 'home' page, one for detailed efficiency and power consumption statistics, and one for vehicle health).

What you will work on
The aim is to integrate everything onto a single tablet; this could be an iPad or Android tablet, or it could be a more custom solution with something like a Raspberry Pi and a display. The former would be a more elegant solution, but there is the challenge of getting the vehicle information (from the CAN bus) onto the device. The tasks required are:
- Getting the info from the CAN bus onto the iPad/tablet/RPi
- Minor processing of the data (such as integrating current*voltage to get energy consumed)
- Designing an aesthetically pleasing UI to display all of this info

Who we are looking for
Anybody with experience in any of the following would be well suited for the project:
- UI Design
- App design for iOS or iPadOS using Swift
- Raspberry Pi development
- Familiarity with the CAN bus

Supervisor Profile
Name: Rahul Swaminathan
Current Position: Head of Electrical at CUER
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Reading Material
The following is a good start to understand what the CAN bus is. This is central to the project, as it is where all the vehicle information to be displayed will come from.
https://www.csselectronics.com/screen/page/simple-intro-to-can-bus

This is some general background on *Helia*:
https://www.cuer.co.uk/tech/