The Motorvator’s Low Voltage Power Supply is a compact and rechargeable, dual-output power supply that will assist the Aztec Electric Racing team by powering the vehicle’s on-board, low-voltage electronics during competition. The internal battery management system protects the power supply against short circuits, overcharging and over-discharging, and damage from high temperatures. The microcontroller interfaces with the BMS integrated circuit through the I2C protocol and data bus to extract and process power supply data, namely voltage, current, and temperature. This data will be sent to the built-in display to indicate when the power supply must be charged and to allow the AER team to determine the current status of the device. As a backup storage, the microcontroller will also write this data to a log in the micro-SD card.