Improving range of eVTOL: Battery Management System for improving travel range

Overview

Today, the range of eVTOL is so limited by battery technology that it can only be utilized for short trips within a city on a single charge. Long-range eVTOL travel is anticipated in the future; hence, battery technology needs to progress, particularly in terms of battery state monitoring.

With the use of sophisticated algorithms and sensors, BMS can precisely determine the battery's state-of-charge (SOC), state-of-health (SOH), and effective life. With this data, power allocation can be optimized, overcharge can be avoided, maintenance can be planned proactively, and the battery's performance and degradation may be predicted by the BMS using predictive algorithms. Effective flight planning, increased system reliability overall, and a longer system lifetime.

Features

- Predictive battery modeling.
- Adaptive charge/discharge profiles.
- Regenerative braking integration