**TITLE**

**E-BATTERY MANAGEMENT SYSTEM**

E-battery management system is a battery cell monitoring and management in electric vehicles is to diagnose each cell states in the battery to improve the efficiency. An intelligent battery cell management system with power efficiency monitoring feature is most likely to optimize the performance and lifespan of the vehicle’s battery. This help in performing the tasks to help validate the safety of the battery. Thorough and frequent monitoring of vital operating parameters of each battery cell we can diagnose each cell individually.

**EXISTING SYSTEM**

Existing system is about battery management system which determines the current state of the battery and control the energy storage at system level.it collect status from all device of the battery system and derive the overall state of the battery and send information the vehicle management system.

**PROPOSED SYSTEM**

A different approach which is based on monitoring each battery cell. Earlier system is highly modular and complex. This problem is solved by the smart battery cell monitoring system. Here each information gathers from each cell using the sensors the information is send to the vehicle management system. Besides it provides state history of each individual cell. There by improving the efficiency of battery.

**SYSTEM STUDY**

**FEASIBILITY STUDY**

The initial investigation points to be question whether the project is feasible. The feasibility study concerns with the considerations made to verify whether the system fit to be developed in all terms. Once the idea to develop the question that rises first will pertain to be the feasibility aspects. Feasibility study is a test of proposed system regarding its efficiency, how much it is feasible than previous battery management system, how much accurate information it produces to test the efficiency of the battery.

Thus, when a new project is proposed, it normally goes through a feasibility study before it is approved for development. A feasibility study is conducted to select the best system that meets the system performance requirements. This entitles an identification description, an evaluation of candidate system and the selection of the best system.

During system analysis, a feasibility study of the proposed system was carried out to see whether it was beneficial to the organization. Three key considerations that are involved in the feasibility study. They are,

* Technical Feasibility
* Economic Feasibility
* Behavior Feasibility

**TECHNICAL FEASIBILITY**

Technical Feasibility centers on the existing computer system hardware, software, etc. and to some extent how it can support the proposed addition. This involves financial considerations to accommodate technical enhancements. Technical support is also a reason for the success of the project. The techniques needed for the system should be available and it must be reasonable to use. Technical Feasibility is mainly concerned with the study of function, performance, and constraints that may affect the ability to achieve the system. By conducting an efficient technical feasibility, we need to ensure that the project works to solve the existing problem area.

Since this project is designed with embedded C as programming language with microcontrollers, temperature, voltage, pressure, balancing current checking sensors etc.: These sensors act as information gathers to the vehicle management system. It is more efficient than existing system and has anytime monitoring, provide each cells state history. Hence this project has good technical feasibility.

**ECONOMIC FEASIBILITY**

The designed system meets the requirement to monitors each cell in the battery with sensors of minimal cost within the affordable price by encouraging more of proposed system. Economic feasibility is concerned with comparing the development cost with the income/benefit derived from the developed system.

Economic Feasibility is mainly concerned with the cost incurred in the implementation of the proposed system. Since this project is developed using embedded C with various sensors is more commonly available and even the cost involved in the installation process is not high.

Similarly, it is not necessary to recruit persons for operating this system because this system can be managed by the current battery checking technician and it display information through the software. Even if we want to train the persons in these areas the cost involved in training is also very less. Hence this project has good economic feasibility.

The system once developed must be used efficiently. Otherwise there is no meaning for developing the system. For this a careful study of the existing system and its drawbacks are needed. The authorities should be able to distinguish the existing one and Proposed one, so that one must be able to appreciate the characteristics of the proposed System, the existing system is not highly reliable. The proposed system is efficient, reliable and also quickly responding.

**BEHAVIOUR FEASIBILITY**

Proposed projects are beneficial only if the system that will meet requirement of battery cell monitoring system. An estimate should be made of how strong reaction when this system can easily diagnose the individual dead cell from thousands of cells.

In this project the vehicle management authority has full control over the system. Here authority can monitor battery cell with individual monitoring.

**SYSTEM REQUIREMENTS AND SPECIFICATIONS**

**HARDWARE CONFIGURATIONS**

These are the hardware configurations used in this project,

* + - * + Processor: Intel core
        + RAM: 4 GB
        + microcontrollers
        + temperature sensor
        + pressure sensor
        + voltage sensor
        + current checking sensor

**SOFTWARE CONFIGURATIONS**

These are the software configurations used in this project,

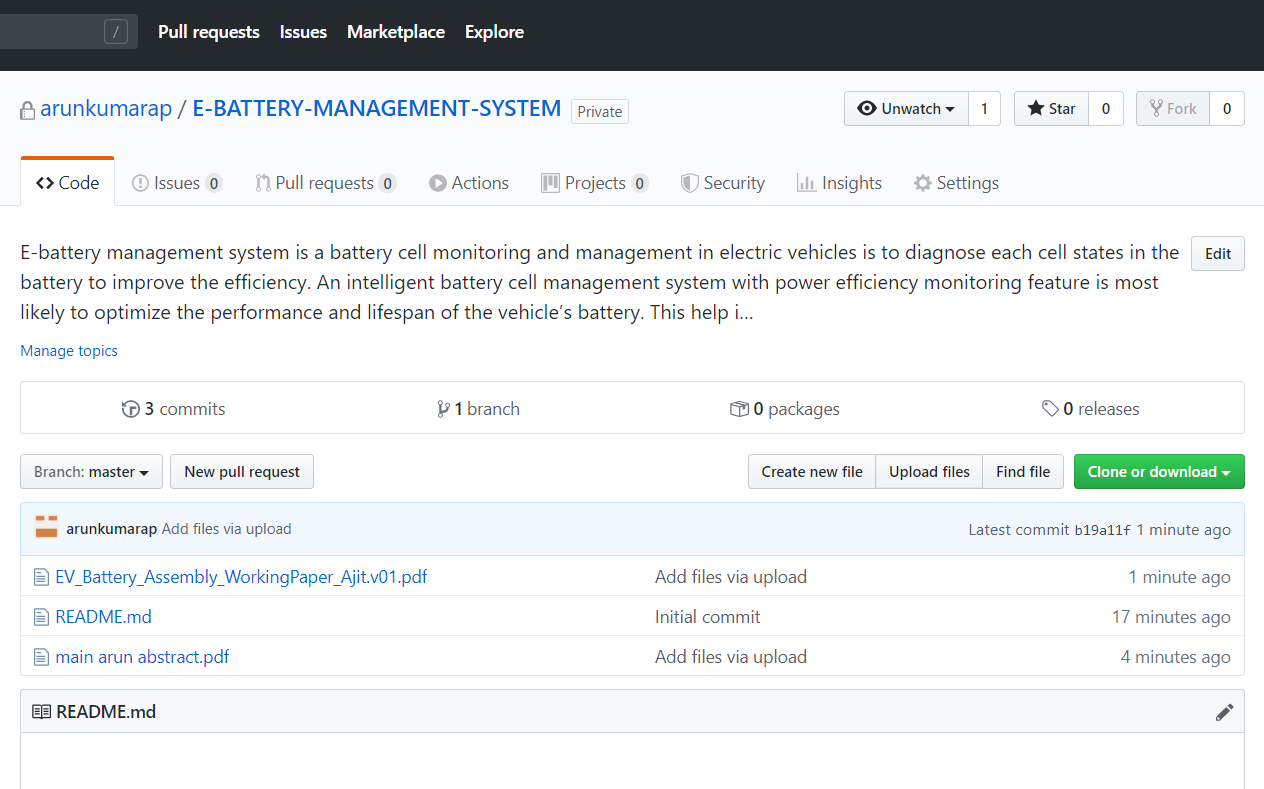
* + - * Operating System: Windows 7
      * Front End: Embedded C

**GITHUB**

ACCOUNT NAME: ARUN KUMAR A P

REPOSITARY NAME: E-BATTERY MANAGEMENT SYSTEM

**HISTROY**

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