Break Failure Indicator

Abstract:

- The "Break Failure Indicator" project aims to develop a safety system for vehicles that provides real-time monitoring and alerts for potential brake failures.
- This project utilizes sensor technology and microcontroller-based logic to detect abnormal braking conditions and promptly notify the driver, enhancing overall vehicle safety.
- The system incorporates sensors to monitor key parameters related to braking, such as brake fluid pressure, pedal position, and wheel speed. These sensors feed data to a microcontroller unit, which processes the information in real-time. By analyzing the sensor inputs against predefined thresholds and patterns, the microcontroller can identify potential brake failures or anomalies.
- The project's success criteria include reliable detection of brake failures, timely and clear driver notifications, and integration with standard vehicle systems.
- Future developments could focus on expanding sensor capabilities, refining alert algorithms, and integrating with advanced vehicle safety features.