TEAM
018

Emergency Aid and Decision Support Device For Aircrafts

Mazen Alabdulmohsen, Anas Alqarni, Hamad Alsadran, Mohammed Aleid
Coach: Dr Hassan Abid

EE AE 3 ICS

Project Overview:

- The proposed project is the development of an independent onboard device designed to assist pilots during in-flight emergencies. This Emergency Aid and Decision Support Device (EADSD) operates independently from the primary avionics and flight control systems to ensure it remains functional even in catastrophic system failures such as engine outages, total power loss, or fuel exhaustion.

Prototype Design

Our Prototype of the Emergency Aid and decision Support device for Aircrafts showcases advanced real-time data analysis and system integration technology converting immediate flight data and contextual factors into actionable life-saving decision support for the flight crew

- Provides Immediate Validated e,ergency checklists and procedures
- Reduces crew workload and decision time in high=stress situations
- Operates with optimized data analysis and system integration

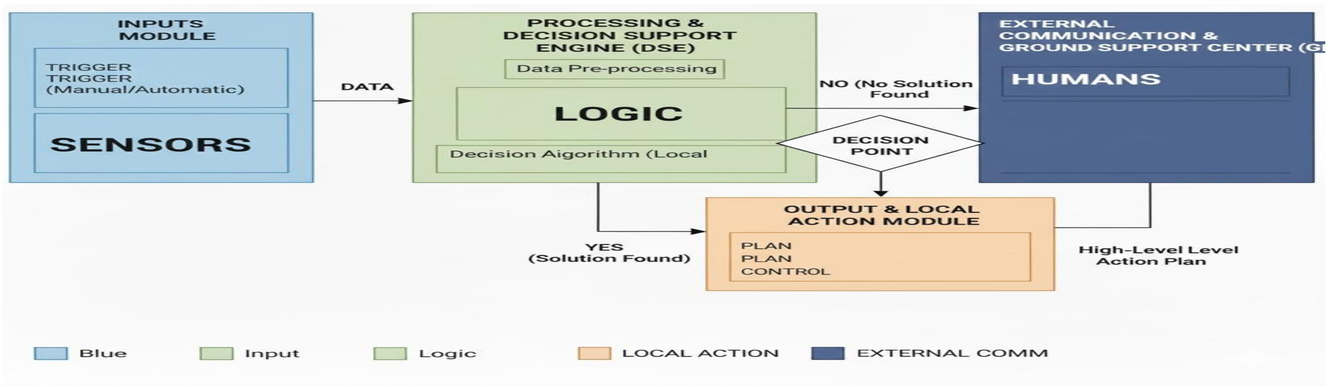
Spefications

- The upgrade cost per aircraft must not exceed 5% of the aircraft's current market value.
- The device must meet FAA/EASA certification standards (DO-178C for software, DO-254 for hardware).
- Specify compatibility with a defined subset of systems validated through integration test with a minimum 99% pass rate.

Target Users

1-Commercial Airline Pilots
2-Private Aircraft Operators
A2-ircraft manufacturers

Ssystem Overview



Project Impact

- Operational Safety & Regulatory Compliance
- `Raising the Bar for Safety and Certification
- Driving Fleet Modernization and Operational Efficiency