Hazard Analysis
Mechatronics

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Revision History

Table 1: Revision History

Date	Developer(s)	Change
Date1	Name(s)	Description of changes
Date2	Name(s)	Description of changes
...	...	...

1 Introduction

This document is a hazard analysis of Group 20's ASL Translator. The ASL Translator is a real-time sign language translation device intended to aid individuals who are hard of hearing in day to day communication tasks. This device may also be used for the purpose of facilitating the learning of sign language in an educational setting.

2 Scope and Purpose

The purpose of this document is to identify hazards that may occur when using the ASL Translator specifically in the components, their causes and consequences on user operation, hazard mitigation, and their respective safety requirements.

3 System Boundaries

4 Definition of Hazard

The definition of a hazard is based on the definition from Nancy Leveson's work. A hazard is a property or condition in the system along with a condition in the environment that results in a loss. A hazard is anything that can cause our system to function incorrectly, or not function at all. In the ASL Translator, there exists only hazards that affect safety during operation.

5 Critical Assumptions

6 Failure Modes and Effects Analysis

6.1 Hazards Out of Scope

6.2 Failure Modes and Effects Analysis Table

7 Safety Requirements

7.1 Hareware Requirement

HR1: The Raspberry Pi board should be checked and tested before using it in the project.
HR2: The camera should be checked before each use to ensure the lenses are clean and working properly.

7.2 Requirement Category 2

8 Roadmap