

Hazard Analysis

Software Engineering

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Table 1: Revision History

Date	Developer(s)	Change
Date1	Name(s)	Description of changes
October 18, 2023	Aamina Hussain	Added sections 1, 2, and 4
...

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[You are free to modify this template. —SS]

1 Introduction

This document includes a hazard analysis for the web application REACH. REACH will allow users to find clinical trials or research studies they are eligible to participate in. It pulls in information about these studies from existing external public databases. This document will analyze and record any hazards to the system REACH. In this case, a hazard is a property of a system, together with the condition of the environment the system is in, which can cause harm or damage and results in a loss. This definition of hazard is from Nancy Leveson's work.

[You can include your definition of what a hazard is here. —SS]

2 Scope and Purpose of Hazard Analysis

The scope and purpose of this hazard analysis is to identify any system hazards and which components they are related to. This includes analyzing the causes and effects of the hazard and the recommended actions to mitigate the hazard, as well as documenting the resulting safety and security requirements.

3 System Boundaries and Components

4 Critical Assumptions

N/A. There are no critical assumptions being made about the software or system.

[These assumptions that are made about the software or system. You should minimize the number of assumptions that remove potential hazards. For instance, you could assume a part will never fail, but it is generally better to include this potential failure mode. —SS]

5 Failure Mode and Effect Analysis

Component	Failure modes	Effects	Causes	Action	SR	Ref.
Trial Fetching/Matching	External Api's unavailable	System is unable to search for trials	System failure on the API providers side, scheduled maintenance, API access method changed	Make application unavailable during scheduled maintenance, prevent users from searching if API is down	Place Holder	Place Holder
	Mismatch in trials being recommended	User attempts to sign up for ineligible trial		Display a warning/disclaimer with respect to signing up for trials	Place Holder	Place Holder
	User eligible for "too many" trials	Too many emails being sent to user and it could make it more difficult for a user to find a trial they really like.	Not enough data entered by user.	Inform user if they haven't entered enough data to get a good search.	Place Holder	Place Holder
Place holder	Place holder	Place holder	Place holder	Place holder	Place holder	Place holder
Place holder	Place holder	Place holder	Place holder	Place holder	Place holder	Place holder

6 Safety and Security Requirements

[Newly discovered requirements. These should also be added to the SRS. (A rationale design process how and why to fake it.) —SS]

7 Roadmap

[Which safety requirements will be implemented as part of the capstone timeline? Which requirements will be implemented in the future? —SS]