

Lab 1 - Product Description Outline

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Spoiler Alert

Team Bronze

CS 410

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1. Introduction

Food recalls are an ongoing public health concern, affecting millions of consumers every year. According to the U.S. Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA), hundreds of recall incidents occur annually due to contamination, undeclared allergens, or foreign materials in products (University of Nebraska-Lincoln, 2025). Despite the frequency and seriousness of these events, many consumers remain unaware of active recalls until it is too late. This lack of awareness contributes to preventable illnesses and even deaths caused by unsafe food consumption.

The core issue lies not in the absence of recall information but in how it is distributed. Current recall communication systems rely heavily on official government websites and static email alerts, which are often overlooked by the public. Studies show that only 13 percent of Americans regularly check FDA or CDC sites for recall updates, and fewer than 3 percent subscribe to automatic alerts. This information gap leaves the most vulnerable populations — such as children, the elderly, and those with allergies or weakened immune systems — at increased risk of exposure to contaminated products.

Three main gaps exacerbate the problem: Awareness Gap: Recall notices spread slowly and unevenly, leaving many consumers uninformed; Engagement Gap: Consumers often underestimate the urgency of recalls; Customization Gap: Existing systems lack personalized alerts tailored to user needs.

A modern solution must be centralized, personalized, immediate, and trustworthy. It should gather verified recall data directly from government sources and deliver it through user-preferred channels (such as push notifications or email) in clear, concise language. Users should be able to filter recalls by allergens, track their inventory, and receive real-time alerts that help them act quickly. By combining accessibility with customization, such a platform can motivate engagement and enhance safety.

Spoiler Alert is an innovative mobile application designed to bridge these gaps. The app provides personalized, immediate, and dependable food recall alerts to help consumers and families avoid unsafe products. Features include barcode and receipt scanning, custom allergen

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filters, and real-time push notifications from FDA and USDA data. By bringing clarity, speed, and trust into recall communication, Spoiler Alert aims to ensure that no consumer is left unaware — and that there are no surprises at the table.

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5. References

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