Introduction

1.1 Problem Statement: PS ID – SIH1621&1673

Background:

Medicines are an important part of healthcare. They help people recover from illnesses, control chronic conditions, and improve overall health. However, in recent years, the problem of fake, expired, or low-quality medicines has been increasing. These harmful medicines can cause serious side effects, make diseases worse, or even lead to death.

In many developing countries, especially in rural or low-income areas, people do not have access to proper tools or professionals to check the quality of medicines. They rely on whatever is available at the local pharmacy or shop. Unfortunately, these places may unknowingly sell poor-quality medicines.

To solve this problem, technology can be a powerful tool. Artificial Intelligence (AI) and Machine Learning (ML) can help analyze medicine data and predict whether a tablet is safe for use or not. By using data such as expiry date, chemical composition, purity level, and more, we can build a system that automatically classifies a medicine as “Safe” or “Not Safe.”

Motivation:

The main motivation for choosing this project is to improve public health by using AI to detect unsafe medicines. There are millions of people who take medicines daily without knowing whether they are of good quality. If we can build a system that checks this in real-time, we can help prevent harm and save lives.

Another motivation is to create a solution that is simple, accessible, and useful for everyone — not just doctors or pharmacists. Even a farmer in a remote village should be able to use our web-based tool to check medicine quality using basic inputs.

Also, this project helps us as students to learn how AI and web development can be used together to solve real-world problems. It allows us to apply our technical knowledge for social good, which is both meaningful and educational.