#### **Software Development Life Cycle (SDLC) for SkyCast - A Weather Forecast Website:**

#### **Introduction**

The Software Development Life Cycle (SDLC) is a structured process that ensures software applications are developed systematically, delivering high quality, efficiency, and reliability while meeting user needs within defined timelines. This document outlines the introductory context for applying the SDLC to SkyCast, a weather forecast website designed to provide real-time weather updates using the OpenWeather API. SkyCast aims to stand out by offering a clean, intuitive, and responsive platform that simplifies access to weather data for a variety of users, including travelers, students, professionals, and businesses. The SDLC process will guide the project from conception to deployment and beyond, ensuring a user-focused and technically sound solution.

#### **Problem Statement**

Weather forecasting is essential for everyday decision-making, such as planning travel, managing agricultural activities, or preparing for natural disasters. However, many existing weather websites overwhelm users with cluttered interfaces, excessive advertisements, or complex navigation, reducing accessibility and usability. SkyCast addresses this problem by delivering a lightweight, user-friendly weather forecasting platform with real-time updates, a minimalist design, and an efficient user interface (UI). The goal is to provide accurate weather insights quickly and seamlessly, enhancing the overall user experience by eliminating the frustrations commonly associated with other weather platforms.