

Problem Statement

Healthy nutrition contributes to preventing non-communicable and diet-related diseases. The World Health Organization (WHO) reported that non-communicable diseases (NCDs) accounted for 71% of deaths worldwide each year, identifying unhealthy diets, smoking, and lack of exercise as major risk factors for NCDs. The Global Burden of Disease Study 2016 reported inadequate intakes of fruits, vegetables, legumes, whole grains, nuts and seeds, milk, red meat, processed meat, sugar-sweetened beverages, fiber, calcium, seafood omega-3 fatty acids, polyunsaturated fatty acids, trans fatty acids, and sodium as dietary risk factors for NCDs. Furthermore, GBD 2016 estimated that 13.87% of deaths were attributable to dietary risk factors in 2016, which increased from 8.54% in 2006. Globally, significant efforts have been made to reduce the burden of NCDs, but the prevention and management of NCDs remains challenging.

Dietary assessment and monitoring are essential steps to measure dietary intake and provide tailored advice that can improve dietary management and health. However, the dietary assessment methods currently used have inherent challenges including reliance on memory, time-consuming conceptualization of portion sizes, requirement of literacy or skilled staff, coding burden, knowledge of foods, and other time-consuming tasks. It has been suggested that data analysis integrating using cloud technologies shows improvement of accurate assessment of dietary intake and customized feedback. Using Nutrition API from rapidapi.com and integrating with cloud technologies could be used to measure dietary intake or improve the measurement of dietary. Although, the complete analysis has not been achieved yet, cloud technologies have the potential to improve real-time assessment of the diets of individuals and groups by incorporating their daily dietary routines.