Government Engineering College Palakkad

Department of Information Technology

Seminar

on

ChatDiet: Empowering personalized nutrition-oriented food recommender chatbots through an LLM-augmented framework

Under the guidance of

Mrs. Sujo Vasu

By

ASHA K WILSON

PKD21IT024

IT 2021-2025

Respected Sir/ Madam.

I have immense pleasure to invite you for my seminar on **"ChatDiet: Empowering personalized nutrition-oriented food recommender chatbots through an LLM-augmented framework" [**1]. The venue, date, time and abstract of it are given below. We look forward to learning and benefiting from your presence and experience in our shared quest for excellence. Therefore, we are delighted to personally invite you to join this Seminar, to shape and drive our futures.

Yours faithfully,

Asha K Wilson

PKD21IT024

Venue: IT216.

Date: 9/10/2024

Time: 2:00 PM to 2:30 PM

Abstract

This paper introduces ChatDiet, an innovative framework for personalized, nutrition-oriented food recommendation chatbots. The profound impact of nutrition on health underscores the need for advanced, personalized food recommendation services. Traditional methods often lack key elements such as personalization, explainability, and interactivity, limiting their effectiveness. While Large Language Models (LLMs) offer interpretability and explainability, they alone do not achieve true personalization. ChatDiet addresses this by integrating personal and population models, orchestrated by a central component that synthesizes relevant information to provide tailored food recommendations. The personal model employs causal inference techniques to evaluate the nutritional impact on individual users, while the population model delivers generalized nutritional insights. The orchestrator combines the outputs of these models, enabling the LLM to deliver personalized and explainable food recommendations aligned with individual health goals.

The evaluation of ChatDiet includes a case study demonstrating the creation of a causal personal model to estimate individual nutritional effects. With a 92% effectiveness rate in food recommendations, as evidenced by tests and illustrative dialogue examples, ChatDiet showcases its strengths in explainability, personalization, and interactivity.

KeyWords

Large Language Model, Personalization, Explainability, Interactivity Chatbots, Recommender systems, Causal reasoning, Nutrition, food

References

[1] Zhongqi Yang et al. ChatDiet: Empowering personalized nutrition-oriented food recommender chatbots through an LLM-augmented framework, smart health 32(1):100465 (March 2024).