

## ABSTRACT

▪ The possibility of incorporating AI into culinary medicine is examined in this literature review in order to overcome obstacles that prevent people from cooking at home. By utilizing prompts based on dietary requirements and tastes, AI-powered meal planning and recipe suggestions can provide individualized guidance for choosing healthy foods. Integrating AI into culinary medicine has the potential to change nutrition and disease prevention, making them more inclusive and accessible by making healthy eating simple and boosting confidence. However, issues with bias, misinformation, privacy, and data security need to be addressed.

## INTRODUCTION

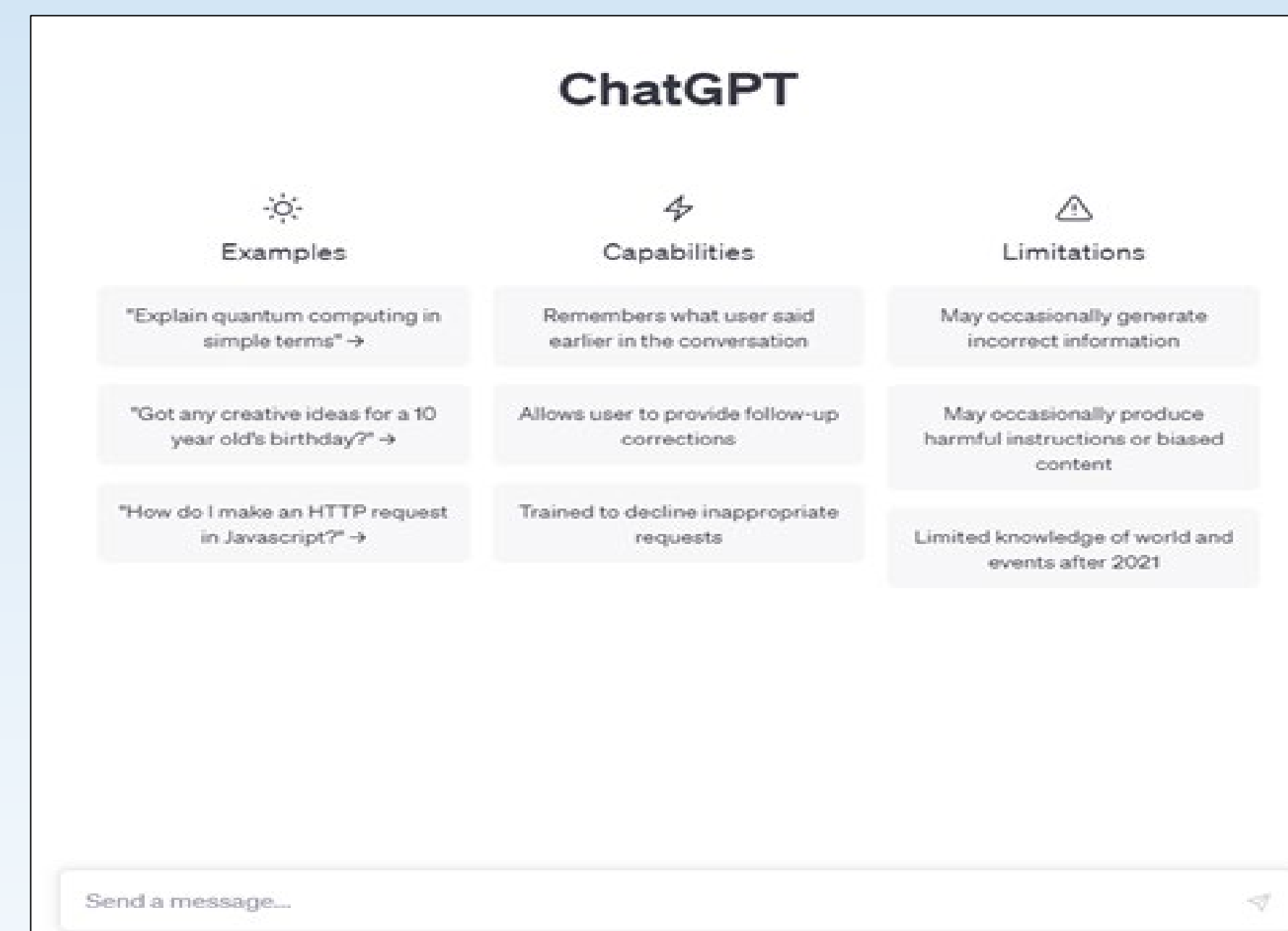
▪ With the growing popularity of the emerging field of culinary medicine, there is a growing understanding of the culinary barriers needed to be overcome to adopt healthier eating habits. Lack of confidence, low skills, and lack of time are some of the most common barriers that prevent individuals from cooking at home. However, integrating AI can offer personalized support for home cooking and help individuals overcome these barriers. AI-powered meal planning and recipe suggestions can guide healthy and nutritious food choices that cater to their dietary needs and preferences. Additionally, AI can modify recipes to accommodate individual health conditions and nutrient deficiencies, making cooking easier and more accessible. Individuals can improve their cooking skills, learn new recipes, and better manage chronic conditions with personalized nutrition recommendations. Therefore, the integration of AI has the potential to empower individuals to overcome culinary barriers and adopt a healthier lifestyle.

## MATERIAL AND METHODS

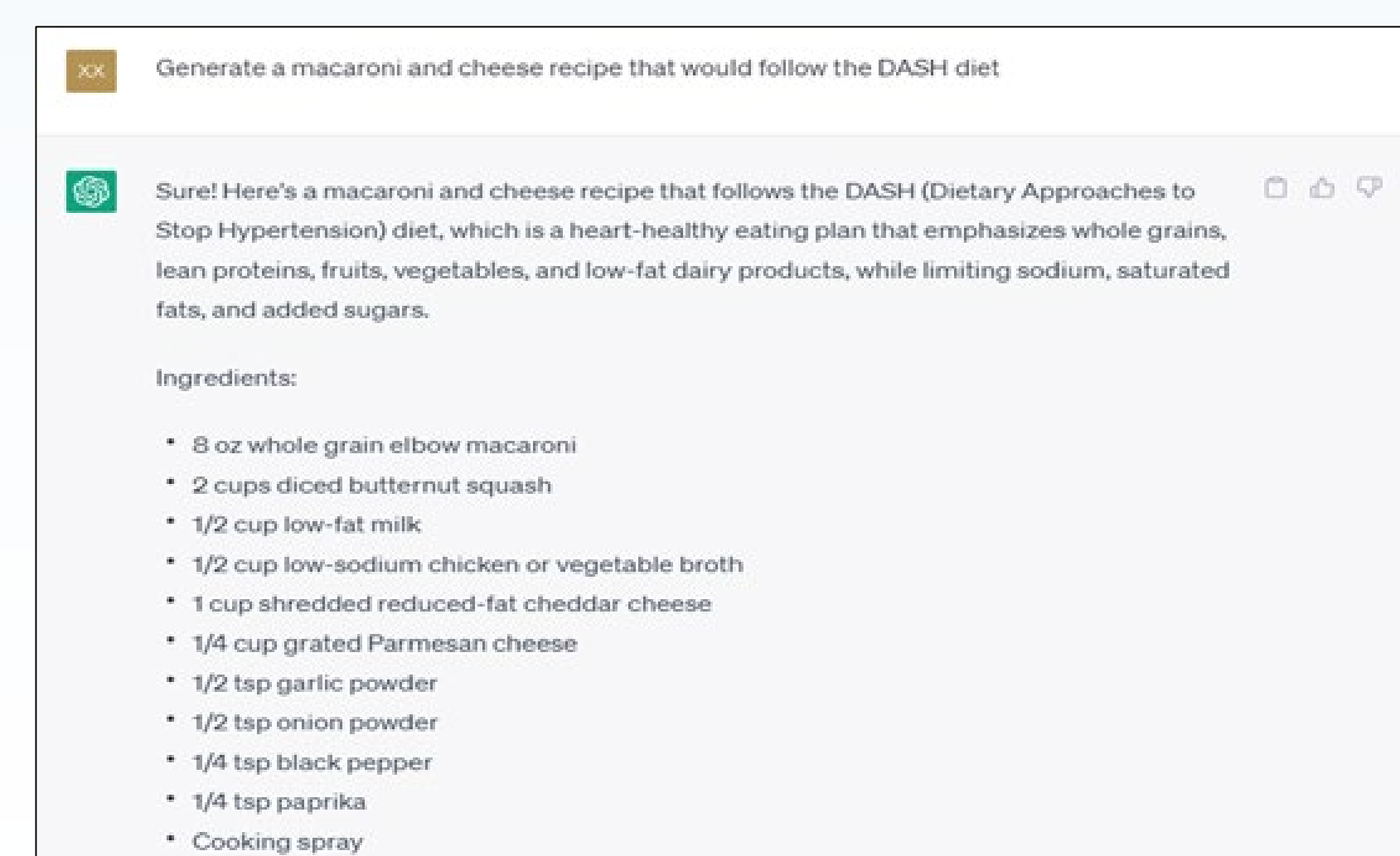
▪ We systematically searched peer-reviewed articles using electronic databases, including Google Scholar and Scopus. Keywords used in the search included "culinary medicine", "nutrition", "AI", "machine learning", "recipe generation", "personalized nutrition", "chronic disease," and "healthcare."

▪ In addition to the systematic literature review, we also utilized ChatGPT, a large language model trained by OpenAI, to generate potential research ideas and identify further relevant literature. We inputted our research question and used the model's capabilities to create new hypotheses and suggest additional search terms and databases to explore. We then analyzed the findings to identify the potential benefits of integrating AI into culinary medicine and provide insights into how patients and physicians can use AI to improve the field.

### Preview of ChatGPT program



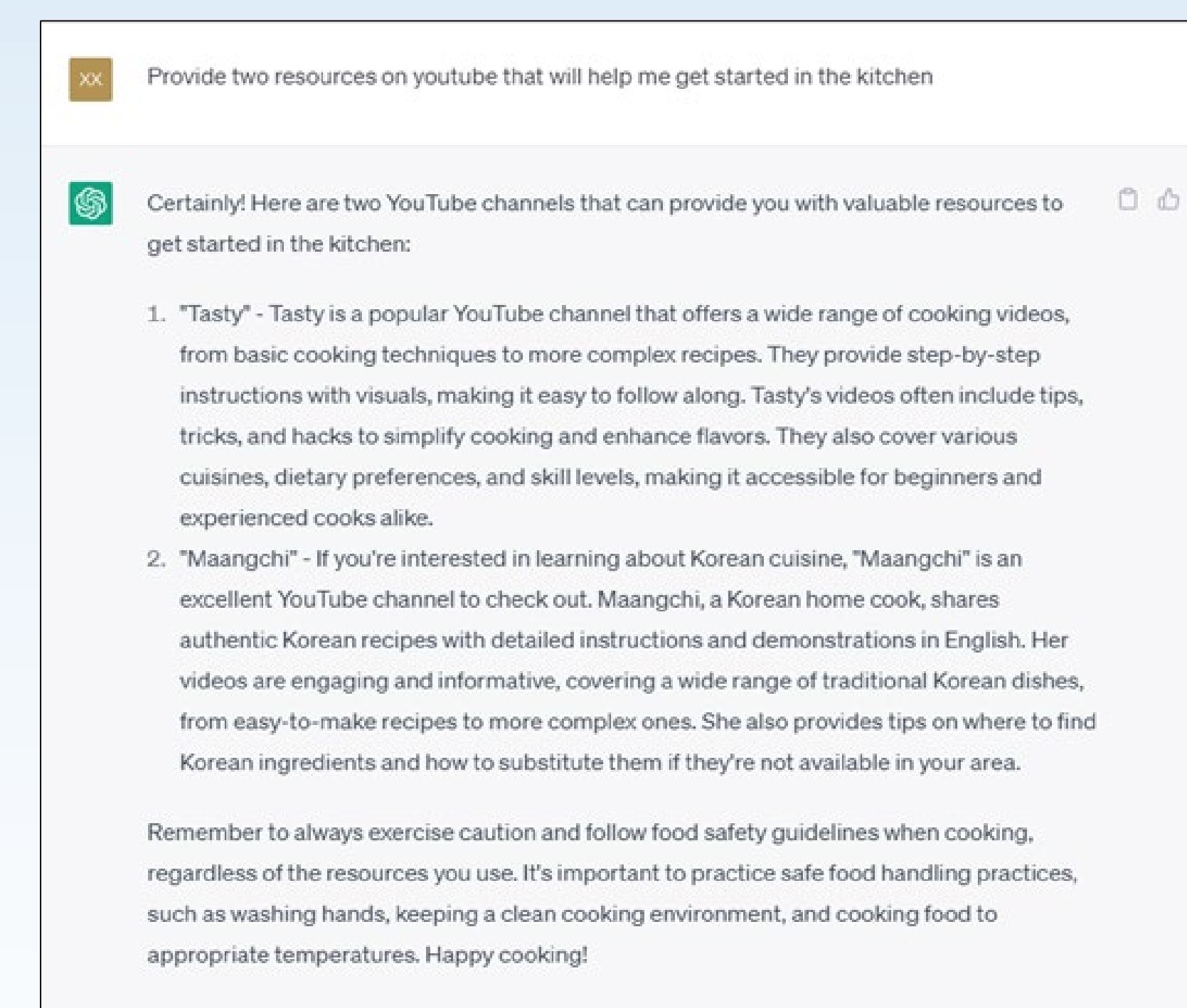
### Example of ChatGPT prompting for DASH diet recommendation.



## RESULTS

▪ The reviewed articles suggest that AI has the potential to address culinary barriers such as lack of confidence, low skills, and lack of time. By incorporating machine learning algorithms, AI can generate personalized dietary recommendations that cater to individual health conditions, dietary preferences, and nutrient deficiencies. These recommendations can help individuals make more informed food choices without requiring extensive culinary knowledge or skills. Additionally, AI-powered recipe recommendation systems can provide easy-to-follow recipes and meal plans, reducing the time and effort needed for meal planning and preparation. By simplifying the process of healthy eating, integrating AI into culinary medicine can increase confidence and motivation for individuals to adopt healthier lifestyles. The concept of culinary medicine, which combines the art of cooking with the science of medicine, is a promising approach to preventing and treating chronic diseases.

### Example of ChatGPT providing suggestions for YouTube channels about cooking



## CONCLUSION

▪ Overall, using AI in culinary medicine can revolutionize how we approach nutrition and disease prevention, providing more personalized and accessible dietary recommendations to improve public health. Furthermore, AI-powered nutrition interventions can be tailored to individuals with varying cultural backgrounds, dietary restrictions, and socioeconomic status, making healthy eating more accessible and inclusive. However, addressing concerns related to privacy, data security, and the potential for AI-generated recommendations to perpetuate bias and misinformation is essential.

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