Video-Oriented Approach to Improve Healthy Eating Behaviors
Yixuan Zhang\textsuperscript{1,2}, Andrea Grimes Parker\textsuperscript{1,2}
College of Information Science\textsuperscript{1}, Bouvé College of Health Sciences\textsuperscript{2}

Opportunity

Abstract
To address the high rates of overweight and obesity in the United States, there is a critical need for interventions that support healthier eating practices. Nutritious dietary habits are a crucial component of weight management. Food journaling is an effective method of encouraging healthy eating behaviors since the food logging helps people identify habits and requires self-reflection on eating behaviors. Current solutions have predominately focused on tracking food itself by keeping a record of calorie and nutritional information. However, the eating experience also includes rich contextual elements, such as factors that are external to an individual and momentary thoughts and feelings that are internal to an individual. We created a video-oriented food journaling application, to record the emotional, sensory, and spatio-temporal elements of meals as a means of supporting self-reflection. The tool supports the vivid documentation of in-the-moment eating experiences to help users understand if and how these factors influence eating behavior and dietary choices.

Background

Eating experience includes
- Food
- Internal Elements
- Contextual Elements

Internal Elements
- Mood
- Emotion
- Level of hunger

Contextual Elements
- Setting
- Social interaction
- Service
- Food
- Flavor
- Texture
- Size
- Lighting
- Music
- Atmosphere
- Temperature

Goals
- Explore the role of information richness—including the emotional, sensory, and spatio-temporal elements of meals—to support self-reflection on healthy eating.
- Investigate deeply about personal eating experience and understanding not only what they eat, but also their eating experience.
- Explore if the multi-dimensional data of dining experience can change eating behavior.

Approach

We designed and developed a mobile application that records dining experiences.

Data or Results

Food Journal
- Food journal feeds
- Create a journal
- Learn more about your plate
- Educational information

Impact

- The novelty of this app is utilizing a video-oriented approach to study eating and encourage healthy eating behaviors.
- Our solution addresses the problem of self-reflection on eating behaviors and dietary choices.
- This research will contribute valued insights to the fields of human-computer interaction and the health sciences, demonstrating how video-based interfaces can support healthy dietary decision making and facilitate the further study of eating behaviors.

Next Steps

- Participatory design that to iterate upon the design with potential users.
- Conduct qualitative analysis based on the field study data to evaluate how video documentation can encourage long-term user engagement and successful behavior change.