Watch Your Flavors: Augmenting People’s Flavor Perceptions and Associated Emotions based on Videos Watched while Eating
Meetha Nesam James (meetha.james@maine.edu)\textsuperscript{1}, Nimesha Ranasinghe\textsuperscript{2}, Anthony Tang\textsuperscript{3}, Lora Oehlberg\textsuperscript{4}
\textsuperscript{1,2}School of Computing and Information Science, University of Maine; \textsuperscript{3}Faculty of Information, University of Toronto; \textsuperscript{4}Department of Computer Science, University of Calgary

**Background**

- People engage in different activities while eating alone, such as watching television or scrolling through social media on their phone or laptop.
- However, the impacts of these visual contents on human cognitive processes, particularly related to flavor perception and its attributes, are still not thoroughly explored.

**Motivation**

To introduce:
- A novel approach to investigate possible augmentations on taste sensations, liking, and emotions based on different videos watched while eating.

To study:
- Videos watched while eating and changes in flavor perception
- Changes in hedonic liking, and taste sensations
- Emotions mediated through different videos while eating, including novel food video genre: mukbang

**Research Question**

Do videos watched while eating augment people’s flavor perceptions in terms of taste sensations, liking, and emotions?

**Methods**

- **Watch Videos**
- **Eat rice sample**
- **Record**

- Perceived taste sensations (Matrix table)
- Overall Liking (Hedonic scale)
- Emotions mediated (CATA scale)

- User Study with 35 participants
- Consumed white rice samples
- Six video conditions: No video, Cooking video, Nature video, Conversational Mukbang video, Mukbang video (with and without sound)

**Results**

- **Contribution**

  Our research explores the effects of watching different types of videos while eating, on participants’ flavor perception in terms of taste sensations, liking, and elicited emotions. Results show that food-based videos watched while eating:
  1) augment taste sensations, consequently, the flavors, and
  2) produce positive emotional changes in participants which would result in an enjoyable eating experience.

  It is envisioned that in the future potential health applications can be explored to reduce calorie intake while increasing the enjoyment of food and beverages.

**Future Work**

- Expand this study to explore the impacts of the effect of video content on appetite, satiety, and related functions on people’s taste sensations, liking, and emotions.
- Investigate the effects of personality traits and external sensory stimuli such as sound, smell, ambient lighting, and temperature on people’s flavor perceptions and related cognitive functions.