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Eye tracking data set of academics making an omelette: An egg-breaking work

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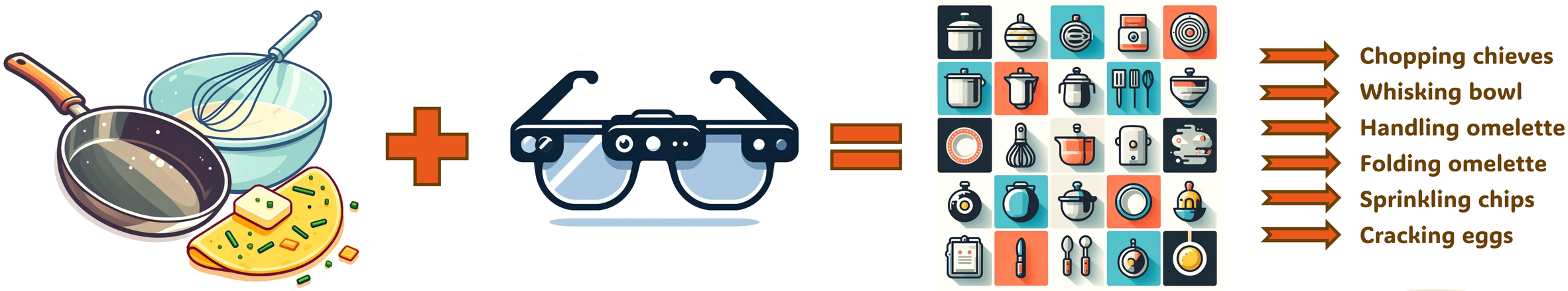


Intro

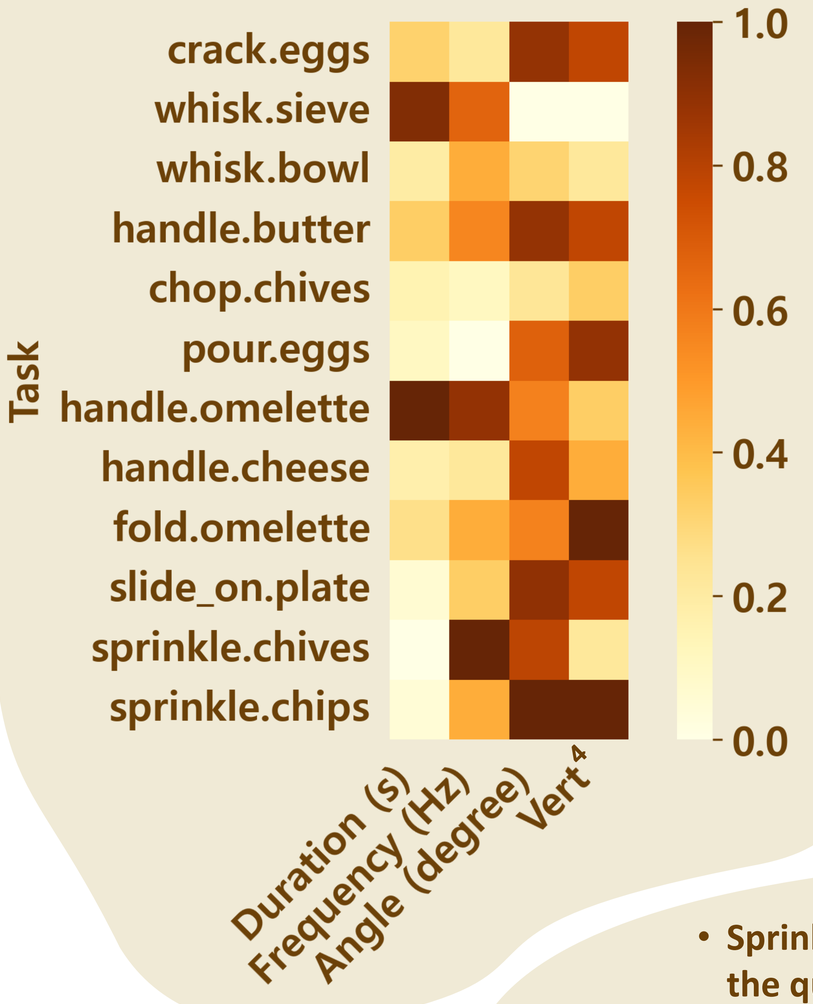
The study delves into the complex world of omelette-making, exploring the diverse techniques and challenges involved.
It investigates how eggademics recreate omelettes after watching a viral video[3] while using eye-tracking technology to analyze their differences in gaze behavior.
The research introduces a new dataset that could aid in sub-task classification for similar cooking scenarios involving multiple subjects, tasks and environments.

Methods

- Participants were asked to watch a recent viral video[3] of a tv show character making an omelette
  - While following the recipe to various degrees of eggsactness, they cracked eggs, whisked them, poured the mixture into a heated pan, added cheese and folded the omelette
    - They topped it with melted butter, chopped chives, and crushed potato chips
      - A total of ten participants, consisting of PhDs, Masters students, neighbors, and Post Docs were recruited for the study
- Eye movements were recorded using the Pupil Labs Invisible at a sampling rate of 120 Hz

3

Results



- The tasks were divided into twelve different subtask
  - Sprinkling toppings (chives and chips) was the quickest step despite showing high amplitudes
- Feedback included positive comments about the texture of crushed chips and complaints about cheese or non-stick pans

[4] The vertical ratio (Vert.) describes the average ratio of the vertical distance of a saccade compared to the sum of horizontal and vertical distance. A value of 0.5 describes equal horizontal and vertical distance.

Future Work

- The egg breaking dataset offers varied actions, ingredient interactions, and sequential processes for analyzing
  - It can aid in developing robust algorithms for task classification or intention prediction
    - Wearable technologies could utilize this data to create smarter interfaces that adapt to scene details and dynamic gaze strategies

The data set can be found under this QR code, have fun analyzing!

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