
Crafting and Tasting Issues in Everyday Human-Food Interactions

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Abstract

From cooking and growing to shopping and dining, digital technology has become a frequent companion in our everyday food practices. Smart food technologies such as online diet personalization services and AI-based kitchenware offer promises of better data-driven food futures. Yet, human-food automation presents certain risks, both to end consumers and food cultures at large. This one-day workshop aims to question emerging food-tech trends and explore issues through creative food-tech crafting and performative dining activities. We will craft, taste, and debate edible prototypes reflecting on diverse socio-political issues in contemporary food-tech innovation. We posit everyday human-food practices as a relatable context to discuss broader societal issues underlying the growing role of technology and data in commonplace human activities. The workshop aims to gather an interdisciplinary group of researchers and practitioners keen on exploring the diverse roles and potential futures of technology design in everyday life.

Author Keywords

Human-food interactions; food technology design, everyday design; food crafting

CSS Concepts

- Human-centered computing~HCI theory, concepts and models

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Introduction

Recent years have seen an increase in digital technologies directed at various aspects of human-food interaction [1]. Mobile applications enabling users to share food and redirect food waste; online platforms for quantified diet personalization; smart kitchenware replacing mundane kitchen tasks and decision-making with AI. These are just a few examples of technology products designed to automate and quantify everyday food practices. Wrapped in techno-optimism, such technologies are often presented as solutions for diverse food problems: from everyday hassles with cooking, shopping, and dieting to systemic issues of malnutrition and unsustainable food production. Despite the promises of better data-driven food practices, such techno-solutionism may cause negative changes to social food traditions as well as to individual human-food relationships [6]. Although these issues have been identified, they received only peripheral attention in human-food interaction literature. Except for a handful of critical works, the majority of existing research is solution-oriented and highlights the innovative potential of the human-food-tech interplay [1][5]. We propose that there is a need to go beyond such food techno-solutionism and embrace reflective approaches to human-food interaction research.

Motivation and Goals

This one-day workshop will explore issues surrounding food-tech optimism and the predominance of solutionist approaches, through creative food crafting and performative dining activities. Using various food and technology ingredients, we will craft, cook, and taste edible prototypes as a materially engaged way to reflect on socio-political issues in contemporary food-tech innovation. Throughout, we will focus not only on

what food-tech design *is* but also on what food-tech design *does* in the everyday-life context. The main objective of the workshop is to engage in down-to-earth human-food interactions, to nurture critical debate addressing food-tech design issues. While addressing food-tech as a primary theme, the workshop also aims to explore the potential of performative food crafting as a relatable context to discuss broader societal issues underlying everyday-life automation and datification. We understand food practices as familiar events that provide an ideal background to discuss technology design for everyday use. The workshop will bring together an interdisciplinary group of designers, artists, practitioners, and thinkers keen on exploring the diverse roles of technology design in everyday food practices. Participants need not be food-tech experts — given the commonplace everyday presence of food, we hope the workshop themes are widely relatable. The organizers have diverse theoretical and experiential backgrounds in food-tech design and research, which will help guide the workshop activities.

Workshop Themes

The workshop will reflect on three primary themes: automation of human-food relationships; social food practices and traditions; and food as a medium for critical engagement. The first two address food-tech issues directly, the third uses food-tech as a context:

1) *Automation of Human-Food Relationships*

The automation of food practices extends everyday food experiences with new forms of convenience. Such automation implies a growing reliance on technology over culinary common sense. For example, smart kitchenware designed to facilitate mundane kitchen

Workshop Schedule

9-10am: Introductions

10-10:30am: Coffee break

10:30am-12pm: Food-tech prototyping starts

12-1:30pm: HFI at lunchtime

1:30-4pm: Food-tech prototyping continues

4-5pm: Food-tech degustation

5-5:30pm: Conclusions & plans for the future

5:30pm-late: Conventional dinner & drinks

practices on the users' behalf, only allowing participation remotely via an app, expects users to sit back and relax while the technology does the job. This diminution of consumers' active involvement in food preparation contributes to a "human-food disembodiment" [7] and a loss of responsibility for personal food choices.

2) *Social Food Practices and Traditions*

Some authors suggest that technology can support enjoyable commensality experiences [3], whereas others highlight its negative impact on socialisation around food [7]. For example, Bodega is an AI-driven pantry designed to replace traditional bodega stores and remove the hassle of grocery shopping. The pantry can be fully operated by an app, removing the need to engage with other people while shopping. The idea of 'unmanned bodegas' has been widely criticized for ignoring the traditional function of bodega stores as neighbourhood joints for everyday social interactions [8]. Systems such as Bodega also limit opportunities for teaching children about the social norms of selecting, shopping for, and purchasing groceries.

3) *Food as a Medium for Critical Engagement with Everyday-Life Automation*

Many issues related to human-food-technology interaction transcend the scope of food realms, to impact the larger space of everyday technology design. Food has a tendency to transform itself into politically and ethically charged situations in our everyday life. We do not cook and eat in isolation; rather, we nurture social relationships, express our personal worldviews, even define certain politics through the food choices we make. When we look at food practices and new technology rituals around that, food present an ideal

medium to address socio-political implications of 'everyday' technology design in general. We claim, for instance, that a critical inquiry into the social impacts of AI-driven kitchenware can yield important insights into the social aspects of AI-driven automation in general.

Workshop Activities: Crafting and Tasting Food-Tech Prototypes

The workshop will involve a hands-on food crafting session where participants and organizers (up to 14 people) collectively and individually craft food-tech prototypes as a way to reflect on our three themes. The prototypes will take the form of cooked and raw dishes, fermented jars, planted seeds, conceptual recipes, and other reflective food artifacts feasible. We will work in small groups of 2-3 people and use a range of food and technology materials provided by the organizers (raw edibles, ferments and microbial starter cultures, spices, seeds, soil samples, digital diet trackers, 3D food printers, food apps, etc.). The collective hands-on practices of chopping, boiling, pickling, and planting, as well as measuring, tracking, quantifying, and uploading will provide occasion to discuss timely food-tech issues. Each participant will be asked to bring a food-related item as a boundary object, embodying a food-tech issue that is of personal concern. These boundary objects can be anything from a 'controversial' food product purchased in a supermarket to a text/photo documentation of a personal food-tech experience. Organizers will also bring boundary food-tech objects, including a dish prepared in the smart oven June¹ contrasted with a homemade fermented pickle jar, personal logs from the food sharing app Share Food², personalized diet plans obtained via the DNA sequencing service Habit³, and the algorithmic recipe recommender OpenSauce⁴. We will also use the HFI Lit

□ **Food-Tech Props
(Boundary Objects)**

¹June Oven:

<http://juneoven.com>

²Share Food:

<http://www.sharefood.sg/>

³Habit:

<http://habit.com>

⁴OpenSauce:

<http://opensauce.cz>

⁵HFI Lit Review App:

<http://www2.ucsc.edu/hfi>

Review App⁵ [1] to diffractively read human-food interaction literature according to issues that arise at the workshop, such as the multiplicity of roles of technology in human life and the balance between automation and individual empowerment. During the hands-on activities, each group documents their prototype through a short hand-drawn / written poster.

The hands-on session will culminate with a degustation where we present and taste prototypes as a prompt for a discussion about everyday food and life automation. The aim is to unpack the impact of the growing presence of digital food technology on everyday food practices; how to understand agency for responsible food interactions in the age of human-food automation; how to leverage traditional food knowledge to develop culturally robust food-tech design; how to harness everyday food-tech knowledge to inform sensitive, socially just design for everyday life. We will conclude the workshop with a proposal for future collaborative events and publications in the food-tech area. We have organized similar participatory food events before [4][5][6][9] and are confident of the feasibility of the proposed workshop schedule and activities.

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