Online Food Recommendations: A Complex Problem?

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ABSTRACT

The problem of recommending food to people has recently become an active field of research. While there is growing body of work investigating how online food recommender systems could potentially be designed to better meet the users' preferences, to date less research has tried to understand the nature of online food choices and their complexity. How do people make their food choices online? To what extent can we model and predict this behavior, and can we actually change it through recommender technology?

Why might we want to change behavior? According to the World Health Organization around 80% of cases of heart disease, strokes and type 2 diabetes could be avoided if people would implement a healthier diet. Health-aware food recommender technologies have been touted as a valuable asset in achieving the ambitious goal of developing systems, which positively impact on the food choices people make. For example, they may help people to implement a healthier diet by suggesting healthier versions of a similar meal they typically like.

In this talk, I will present our latest research on the online food recommender problem. I will reveal the complex nature of online food choices and how this knowledge can be used to build novel food recommender systems. To conclude, I will present some preliminary work aiming to nudge people towards healthier food choices.

CCS CONCEPTS

• **Information systems → Recommender systems**.

KEYWORDS

Food recommendation, Health recommender systems

Speaker biography: Christoph Trattner is an Associate Professor at the University of Bergen in the Information Science & Media Studies Department. Previously, he was an Assistant Professor at MODUL University Vienna in the New Media Technology Department. He also founded and led the Social Computing department at the Know-Center, Austria's research competence for data-driven business and big data analytics. He holds a PhD in Computer Science and Telematics from Graz University of Technology (Austria). Christoph's research background includes Applied Machine Learning, Predictive Modeling, Recommender Systems, Social Networks Analysis, Human Computer Interaction and Data Science in particular. He is leading an international research effort that tries to understand, predict and change online food preferences to tackle health-related food issues such as diabetes or obesity. Since 2010, he published two books and over 90 scientific articles in top conferences and journals including, e.g., JASIST, UMUAI, TiiS, ComCom, EPJ Data Science, WWW, ICWSM. He holds several Best Paper/Poster Awards and Nominations, including, the Best Paper Award Honorable Mention in 2017 at the prestigious WWW conference series.