The Hong Kong University of Science and Technology

Department of Information Systems, Business Statistics and Operations Management

Webinar Announcement

The Engagement-Diversity Connection: Evidence from a Field Experiment on Spotify

by

Mr. David HOLTZ
MIT Sloan School of Management

Date	:	**Wednesday, 11 November 2020**
Time	:	**9:00 am - 10:30 am (Hong Kong Time)**
		Click here to join Zoom
Zoom Details	:	**Meeting ID: 962 7613 9143**
		Passcode: 860155
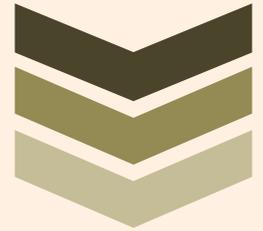
Abstract:

We present results from a randomized field experiment on approximately 900,000 Spotify users across seventeen countries, testing the effect of personalized recommendations on consumption diversity. In the experiment, users were given podcast recommendations, with the sole aim of increasing podcast consumption. However, the recommendations provided to treatment users were personalized based on their music listening history, whereas control users were recommended the most popular podcasts among their demographic group. We find that the treatment increased podcast streaming, decreased individual-level podcast streaming diversity, and increased aggregate podcast streaming diversity. These results indicate that personalized recommendations have the potential to create consumption patterns that are homogeneous within and diverse across users, and provide evidence of an "engagement-diversity trade-off" when optimizing solely for consumption: while personalized recommendations increased user engagement, they also affected the diversity of consumed content. This shift in consumption diversity can affect user retention and lifetime value, and impact the optimal strategy for content producers. Additional analyses suggest that exposure to personalized recommendations can also affect the content that users consume organically. We believe these findings highlight the need for both academics and practitioners to continue investing in personalization techniques that explicitly take into account the diversity of content recommendations.

Bio:

David Holtz is a PhD candidate in the Information Technology group at MIT Sloan. His research interests span online marketplace and platform design, causal inference, applied machine learning, and network science. Prior to beginning his PhD, he worked in the private sector as a data scientist, most recently at Airbnb. As an academic researcher, he has conducted research with a number of firms, including Airbnb, Facebook, and Spotify. David holds an SM in Information Technology from MIT, an MA in Physics & Astronomy from Johns Hopkins University, and a BA in Physics from Princeton University.