CHARACTERIZING GROWTH AND DECLINE IN ONLINE UX COMMUNITIES

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INTRODUCTION

The field of user experience (UX) design has grown rapidly, leading to online communities like Reddit becoming popular forums for UX practitioners. They provide accessible, global platforms for collaboration, and also help address information needs via Q&A practices. However, there is little research on the stability of these communities in a large-scale, longitudinal manner.

We conduct an exploratory, quantitative study of the digital health of online UX communities, focusing on two of the largest discussion-orientated platforms: the 'r/userexperience' subreddit community on Reddit and the UX subforum on Stack Exchange (SE).

RESEARCH QUESTIONS

RQ1: How do different UX platforms compare in their longevity and growth?

RQ2: Are changes in the discussion of UX concepts associated with changes in community size?

METHODS

Overview:
1. Longitudinal, quantitative analysis of forum discussion data to measure user activity and growth
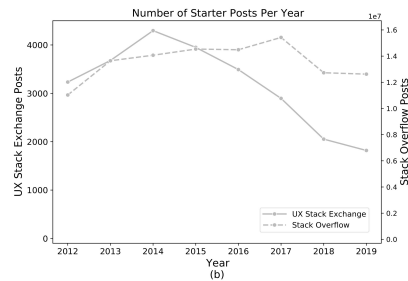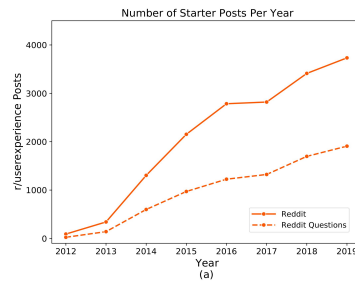2. Text-based analysis on post content to understand *what* users post

Data:
- Reddit dataset: Pushshift.io's API
- Stack Exchange dataset: periodic data dump, preprocessed through postgresql instance

Text-based Analysis:
- For both datasets, we tokenize, lemmatize, and apply a part-of-speech tagger to title and body text. We match Kou and Gray's keywords for UX concepts to the nouns after processing
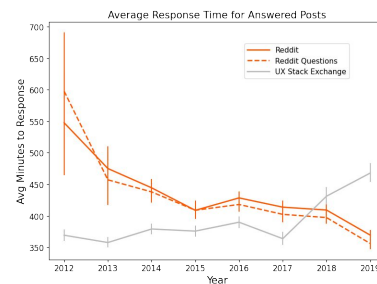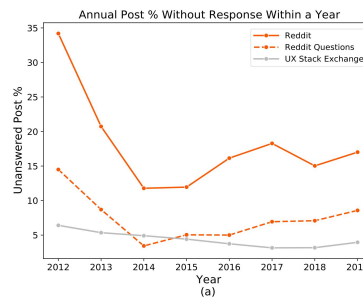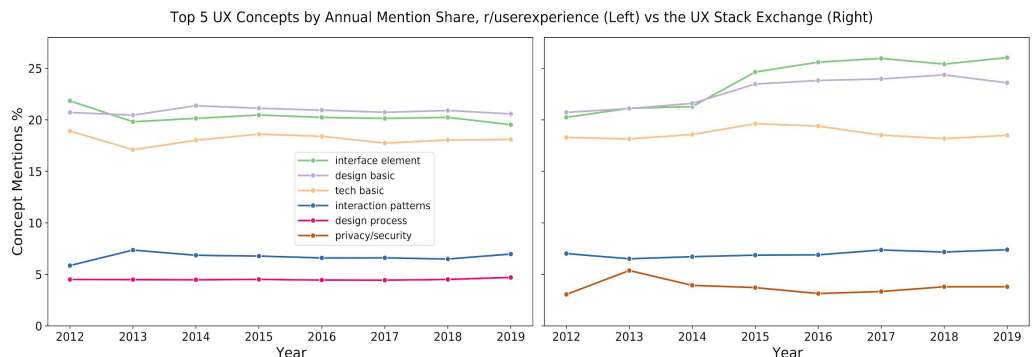
FINDINGS

r/userexperience has steadily grown over time, while SE has contracted since its 2014 peak.

Baselines (dashed):

1) Reddit questions
2) Stack Overflow

Although declining, SE has fewer unanswered posts than Reddit. Mean response times are also better on SE until 2018, long after the start of its decline.
Thus, community decline seems to be unrelated to responsiveness.

For both platforms, the top three UX Concepts discussed are focused on implementation, e.g. Interface Elements, Basic Design, and Basic Tech concepts.

We found that the most popular concepts became more overrepresented on SE, suggesting that niche, higher-level UX concepts were the first to leave SE as it shrank. Between 2014 and 2017, the fraction of mentions shared by the rarest 5 concepts dropped from 4.9% to 4.7% on Reddit, whereas on SE they dropped from 4.8% to 3.3%.

KEY TAKEAWAYS AND LIMITATIONS

Implications: Decline in UX communities is unlikely driven by unresponsiveness alone, so we need more holistic measures of user interaction dynamics to understand community health. Discussions of niche, higher-level concepts like Affordance need to be supported, because they are disproportionately affected by decline or even potentially preventative against community shrinkage.

Limitations and Future Work:
- Our work is correlational and does not pin down casual mechanism of growth
- Future work should consider community norms, moderation rules, or content-level aspects such as politeness, which may more closely predict community health

References:
- Yubo Kou and Colin M Gray. 2019. A Practice-Led Account of the Conceptual Evolution of UX Knowledge. In *CHI'19*.
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