



# Algorithmic Influence of TikTok: Mixed Method Study of Digital Nomads and Their Online Identity Attributes

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## Abstract

This paper studies attributes of the online identity of a niched group of highly mobile remote workers (here and after digital nomads, DNs) and how the algorithmic platform of TikTok shapes their online identity. Online identity is a social identity that an Internet user establishes in online communities and websites. It may also be an actively constructed self-presentation and configure the descriptive characteristics of a person in the online space. TikTok is a popular social media platform known for its short-form video content with a maximum length of 60 seconds. Its unique algorithm-driven platform affordances play a significant role in shaping how users construct their online identities. In this study, we rely on the sufficient metadata leveraged by the TikTok platform and perform a mixed-method approach combining qualitative content analysis with the affordance of computational analysis of video metadata. We want to highlight that content visibility becomes a part of a broader socio-technological context, affecting the construction of online imaginaries of the body and aligning with what resonates with the identities of the target audience.

First, we scraped all available metadata afforded by TikApi, an unofficial API platform on top of TikTok. Next, we used snowball sampling, a non-probability sampling technique where a small pool of initial hashtags provides us with new co-existing hashtags and grows like a rolling snowball. The hashtags #digitalnomadlifestyle, #digitalnomadgirl, #digitalnomadlife, #remotework, #travellife, #workfromanywhere, and #workfromhome that we identified during pre-study allowed us to conduct a dataset with 6010 unique video contributions created by 2142 unique contributors. For the first qualitative part of the study, we chose to focus on the video format called “Duet,” a distinctive feature on the platform that allows users to create and share a split-screen video with another user's existing video content. We selected this format because duets creators are already actively engaging in the TikTok algorithmic practices and engage with peers with established online identities. Duet format helped us explore the

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potential relationships between their identity attributes and factors such as algorithmic-driven engagement and visibility. We used principles of grounded theory and comparatively analyzed frames of 10 duet videos, building a conceptual comprehension of and mapping the attributes of online identity. We found out that DNs continuously adapt their content and online personas to changing trends, algorithm preferences, and social connections. This process may lead to the development of a multifaceted online identity that grows and changes alongside the platform. Thus, we conclude that some online identity attributes in our study are static while others are dynamic over time and employed computational time-series analysis of the online identity attributes such as username, avatar, and video captions and visualize the changes over time. This research will contribute to the academic fields of digital identity studies and the dynamics of algorithmic visibility in digital environments. It will provide an in-depth exploration of how TikTok's algorithmic mechanisms mold the digital self-representation of creators with niche interests. Specifically, it will shed light on which facets of online identity are more susceptible to algorithmic shaping and which demonstrate resilience. By doing so, it aims to present a nuanced understanding of identity negotiation in the era of algorithm-driven social media platforms, specifically for the niched DNs' identity.

**Keywords:** digitalnomad, online, identity, TikTok, algorithms