A NEW ERA OF ONLINE DATING? AN ANALYSIS OF THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN DATING APPS

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Introduction

Dating apps[1] have undergone significant fluctuations over the past five years. The pandemic led major services such as Tinder, Bumble, and Happn to break records in daily swipe[2] numbers (Fortune, 2021). However, since 2023, they have been experiencing the so-called "dating app winter," with a continuous decline in registered users. In Brazil, Tinder saw a 20% decrease in users between 2022 and 2024 (G1, 2024), and companies predict revenue stabilization only by 2026 (BN Bloomberg, 2024).

Reports from dating app companies themselves have attempted to identify the causes of this decline in active users, which is occurring across major platforms such as Tinder, Bumble, and Happn. For instance, Tinder's Future of Dating Report (2023) indicates that Generation Z users—the most present demographic in online dating apps—feel a lack of authenticity in interactions and have higher expectations when searching for romantic and sexual partners (Tinder, 2023). Similarly, Bumble's Global Dating Trends 2025 report highlights increasing user frustration and resentment toward online dating services. Reports also point to growing fatigue in app usage, often referred to as "dating app burnout" or "affective burnout."

Faced with this scenario, companies appear to be "groping in the dark" to find strategies to attract new users. The incorporation of Artificial Intelligence has emerged as one of the primary solutions explored by these platforms.

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[1] Dating apps are applications designed to facilitate connections between individuals seeking various types of relationships, including romantic, sexual, and platonic interactions, among others.

[2] In this context, the swipe refers to the user's action of dragging left or right to indicate interest or lack thereof in engaging with the presented user, should a match occur.

Among the most notable announcements, Tinder has revealed plans to replace its swipe-based model with AI-driven technologies for profile discovery and matching (Tinder, 2025). Bumble's CEO and founder, Whitney Wolfe, has also suggested the possibility of using AI as a type of concierge, allowing user bots to converse and determine compatibility before introducing real users to each other (CNBC, 2024).

These changes suggest the possible beginning of a fourth phase of online dating[3], characterized by new service models and more intensive integration of AI technologies into these platforms.

Given this context, this research in progress seeks to answer the question: "What are the trends in AI integration within dating apps?" We hypothesize that companies are investing in strategies to further reduce selection time, focusing on mechanisms that enhance efficiency and user satisfaction while minimizing discomfort in app usage.

This study is analyzing news articles from English and Portuguese-language media, interviews with executives from these platforms, and official announcements from major dating services (Tinder, Bumble, OkCupid, Happn, among others) between 2020 and 2025. The goal is to identify the key features being proposed and their intended impact on user engagement.

Thus, the research adopts a qualitative approach, gathering news reports and company data over the five-year period to construct a timeline of AI-driven announcements, assess periods of intensified technological changes, and examine correlations with declines in user numbers. Additionally, the study aims to determine whether there is a standardized set of AI-based features emerging across these platforms.

This research is significant for understanding the evolution of online dating over the past 30 years. Despite the increasing number of studies on the topic — particularly regarding dating apps in the post-COVID-19 era — there are still few analyses that focus on how online dating evolves alongside technological paradigms. For example, swipe-based apps, which have dominated the industry for the past 13 years since Tinder's emergence, are closely linked to platformization processes (Poell, Nieborg, van Dijck, 2019), dataism (van Dijck, 2014), and the datafication of life (Lemos, 2021). The very concept of online dating can be seen as an extension of the commodification of romantic relationships, a process that predates the internet's popularization (Illouz, 2011).

The paper aligns with discussions from scholars on the commodification of emotions and the neoliberal appropriation of intimate life, as explored by Eva Illouz, Dana Kaplan, and Larissa Pelúcio. It also engages with research on platformization and datafication

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[3] The first phase would have occurred at the beginning of the internet's popularization, characterized by the use of forums, emails, and classifieds. The second phase is marked by the emergence of dating websites (1995–2012). The third phase, which remains ongoing, is associated with the rise of georeferenced swipe-based applications. Each phase is defined by its dominant service model. However, we emphasize that other models coexist, such as the use of social media platforms for seeking affective-romantic and affective-sexual partners.

across different life domains, including romantic relationships, as analyzed by José van Dijck, Thomas Poell, David Nieborg, and André Lemos.

As preliminary findings, we have identified an intensification of new feature proposals aimed at minimizing user frustration, errors, and energy expenditure in the search for romantic and sexual partners. These innovations adopt a highly solutionist perspective, delegating decision-making to AI-based technologies.

Beyond these key findings, this research seeks to correlate company announcements with user dissatisfaction reports, critically examining whether the proposed changes genuinely address the frustrations highlighted in industry reports.

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