



## Googling “nft fashion”: Mining Google to Understand Trends in Fashion NFTs

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### Introduction and Purpose

A Non-Fungible Token (NFT) is a digital certificate of authenticity that proves ownership of anything digital such as art, music, and fashion, applying blockchain technology. According to Statista (2023), revenue in the NFT segment in 2022 was \$2,461 million and is expected to reach up to \$8,068 million, with 64.45 million users by 2027. Following this trend and high profitability, fashion brands started jumping into the NFT market from which the term “fashion NFTs” has been emerging. Fashion NFTs refer to blockchain-based virtual fashion items which include garments, shoes, accessories, and all fashion related articles. Many fashion brands are preparing or have already launched fashion NFTs. For example, Dolce & Gabbana launched 9 pieces of NFT of the Collezione of Genesi on the polygon blockchain marketplace in August 2021. Balenciaga, in collaboration with a gaming company, Fortnite, has provided a digital environment where game players can customize their outfit with Balenciaga collection in the virtual store. Furthermore, after acquiring RTFKT, the leading creators of virtual sneakers and collectibles, Nike, Inc. has sold its first pair of virtual sneakers for about \$115,000 and more recently registered a patent for making sneaker information into NFT. As such, the fashion industry is excited about this new economic opportunity that the metaverse and fashion NFTs can bring forth. However, most research on NFTs is limited to the fields of computer science, engineering, economics, materials science, and mathematics (Taherdoost, 2023). Furthermore, research on fashion NFTs is in its early stages with the majority of which relied on exploratory approaches such as conceptualization (Joy et al., 2022), systemic reviews of literature (Baek et al., 2022) and interviews (Alexander & Bellandi, 2022). In fact, little is known about the fashion NFTs and how they are communicated on the web. Accordingly, this study aims to explore the overall trends of fashion NFTs, using text mining analysis with Google data.

### Methods

The process of transforming human language into a computer language is called natural language processing (NLP), which allows to extract keywords for research by identifying the linkages between texts through techniques such as natural language processing and morphology analysis (Callon et al., 1983). Google, the most popular search engine worldwide, was used as a source for data collection. Using the keyword of 'nft fashion', all documents were gathered. We used 'nft fashion' as the keyword instead of 'fashion nft' because the former resulted in 6 million documents more than the latter. Due to the recency of NFT, setting a crawl-rate was not necessary; all the data were crawled at the time of data collection (April 26, 2022), which resulted in a total of 360 documents after raw data was screened and cleaned up. With Python (Python 3.8.3), a programming language, we were able to extract title, URL, date, and two lines



## Conclusions

The present research is the first study to identify the key trends around “fashion NFTs” as expressed in Google data using a text mining approach. Our research contributes to the literature by providing a current grasp of the patterns of fashion NTF communicated on the web. Practically, the findings provide fashion NFT sellers and fashion brands with up-to-date insight into how fashion NFTs are communicated and understood at the early stage of development. Future research that explores fashion NFTs from a consumer’s viewpoint using exploratory and/or empirical research methods would be fruitful.

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