UNDERGRADUATE THESIS

DISCORD BOT FOR VIDEO GAME RECOMMENDATIONS USING COLLABORATIVE FILTERING AND TF IDF METHODS

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APPROVAL SHEET

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STATEMENT OF ORIGINALITY

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ABSTRACT

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Technological developments significantly assist in carrying out daily activities and work. This technological development can be seen in the use of various types of Artificial Intelligence (AI) and various software for computerization, robots, and others. One technology that is developing very rapidly is Artificial Intelligence (AI). This AI technology development is happening very quickly and covers almost all human fields such as business, entertainment, education, and others. This AI implementation has begun to reach all activities on existing digital platforms, one example is the creation of bots in communication applications. The use of bots in this communication application is widely used to facilitate users, one of which is Discord. This application is often used by gamers to interact with each other because of its many features that are very helpful for gamers when playing video games. Not only when playing video games, but Discord is also commonly used as a discussion forum for seeking information about a particular topic using server and channel features or special spaces for communication. This study aims to help users, namely gamers, in searching for game recommendations using Discord bots using the TF-IDF and CF methods. This can be done by the author by naming each dataset to produce hybrid recommendations. The evaluation results showed that this bot had high hitrate and recall scores, indicating it was able to find at least one relevant recommendation (96.36%). Its precision score was 64.73%, indicating that the recommendations provided were, on average, a match to the genre or tag.

Keywords: Discord, Bot, Gamers, Game, AI

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The author realizes that this thesis contains many shortcomings. Therefore, constructive criticism and suggestions from all parties are highly appreciated for the perfection of this thesis. Finally, despite its limitations, the author hopes this report will be beneficial to all parties in general and the author in particular.

Surabaya, June 10, 2026

Writer

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t	:	Term t in the document
tf	:	t term number
idf	:	word uniqueness meter
N	:	Total documents
d	:	document
df	:	documents that have t term
f	:	frequency of word t in the document
α	:	weight between 0 and 1
A	:	game vector based on users playing
B	:	other game vectors compared
u	:	user or the player
∑	:	sum of all users from u = 1 with n
p	:	user
i	:	items or goods