



UNDERGRADUATE THESIS

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

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SURABAYA
2026**

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COLLABORATIVE FILTERING AND TF IDF METHODS**

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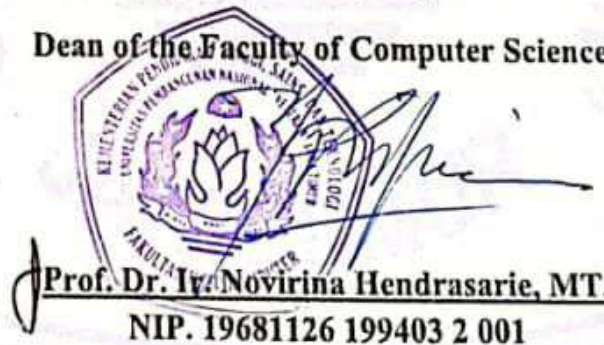
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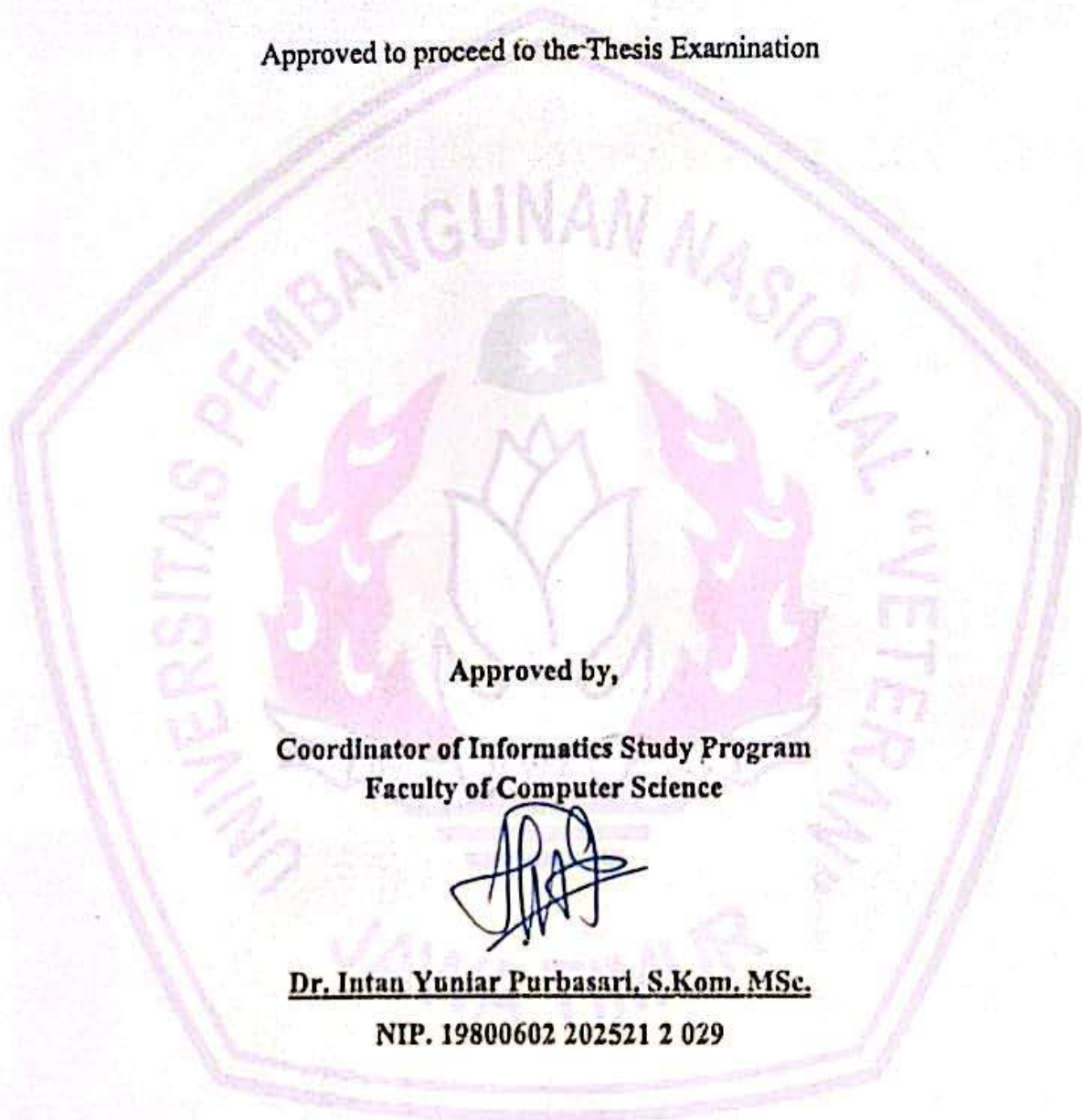

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STATEMENT OF ORIGINALITY

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Hereby declares that this undergraduate thesis contains no part of any other scientific work that has been submitted to obtain an academic degree at any higher education institution. Furthermore, it does not contain any work or opinions previously written or published by others, except for those which are explicitly cited in this thesis and listed completely in references.

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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

ACKNOWLEDGEMENTS

Praise be to Allah SWT for all His grace, guidance and gifts to the author so that the thesis entitled " **Discord Bot for Video Game Recommendations Using Collaborative Filtering and TF IDF Methods**" can be resolved well.

The author would like to thank Mr. Prof. Dr. Basuki Rahmat, S.Si., MT., ITS-AI and Mr. Muhammad Muharrom Al Haromainy, S.Kom., M.Kom., as Advisors 1 and 2, who have taken the time to provide guidance, advice, and motivation to the author. The author has also received much assistance from various parties, both moral, spiritual, and material. Therefore, the author would like to express his gratitude to:

1. Mrs. Prof. Dr. Ir. Novirina Hendrasarie, MT as Dean of the Faculty of Computer Science, National Development University "Veteran" East Java.
2. Mrs. Dr. Intan Yuniar Purbasari, S.Kom. MSc. as Head of the Informatics Study Program, Faculty of Computer Science, National Development University "Veteran" East Java.
3. Lecturers of Informatics Study Program etc.

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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LIST OF NOTATIONS

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	:	sum of all users from $u = 1$ with n
p	:	user
i	:	items or goods