

**IMPLEMENTASI *DYNAMIC DIFFICULTY ADJUSTMENT* PADA *NON-VIOLENT VIDEO GAMES* UNTUK MENINGKATKAN DAYA TARIK
PEMAIN**

Skripsi

diajukan untuk memenuhi bagian dari
syarat memperoleh gelar Sarjana Komputer
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ABSTRAK

Video Games merupakan sebuah permainan elektronik yang memiliki tujuan sebagai salah satu media hiburan pada zaman modern. Sebagai media hiburan, sebuah *video games* harus dapat membuat suasana pengalaman pada pemain agar termotivasi untuk menyelesaikan *game* tersebut. *Dynamic Difficulty Adjustment* merupakan sebuah metode yang digunakan untuk menyesuaikan tingkat kesulitan secara otomatis berdasarkan kemampuan yang dimiliki oleh pemain. Tujuan dari metode ini adalah agar pemain dapat mencapai *flow state* dimana pemain merasa termotivasi untuk melanjutkan permainan dan tidak menghadapi tingkat kesulitan yang terlalu tinggi sehingga menyebabkan pemain merasa frustrasi atau tingkat kesulitan yang terlalu rendah sehingga menyebabkan pemain merasa bosan. Tujuan dari penelitian ini adalah untuk meningkatkan daya tarik *non-violent video games* dengan menerapkan metode DDA. Pendekatan DDA yang akan digunakan adalah algoritma *Hidden Markov Model* (HMM) yang merupakan salah satu dari metode probabilitas. *Game* ini diuji dengan menggunakan kuesioner *Game User Experience Satisfaction Scale* (GUESS). Hasil pengujian menunjukkan bahwa *game* yang diuji memiliki skor akhir yaitu 51,3 yang merupakan diatas rata-rata dan menunjukkan bahwa *game* tersebut cukup menarik.

Kata kunci: *dynamic difficulty adjusment*, *DDA*, *video games*, *difficulty*, *AI*, *probabilistic*, *HMM*.

IMPLEMENTATION OF DYNAMIC DIFFICULTY ADJUSTMENT IN NON-VIOLENT VIDEO GAMES TO INCREASE PLAYER ATTRACTION

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ABSTRACT

Video Games is an electronic game that has a purpose as one of the entertainment media in modern times. As an entertainment media, a video game must be able to create an atmosphere of experience where players will be motivated to complete the game. Dynamic Difficulty Adjustment is a method used to automatically adjust the difficulty level based on the abilities of the player. The purpose of this method is so that players can reach a flow state where players feel motivated to continue the game and do not face a level of difficulty that is too high, causing players to feel frustrated or a difficulty level that is too low, causing players to feel bored. The purpose of this study was to increase the attractiveness of non-violent video games by applying the DDA method. DDA approach that will be used is the Hidden Markov Model (HMM) algorithm which is one of the probabilities methods. This game was tested using the Game User Experience Satisfaction Scale (GUESS) questionnaire. The test results show that the game being tested has a final score of 51,3 which is above the average and indicates that the game is quite interesting.

Keywords: dynamic difficulty adjustment, DDA, video games, difficulty, AI, probabilistic, HMM.

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