# PENYESUAIAN RINTANGAN GAME HOROR SIDE-SCROLLING DARI EKSPRESI WAJAH PEMAIN MENGGUNAKAN LIBRARY MOODME UNITY

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## ABSTRAK

Game memiliki banyak genre salah satunya yaitu horror. Game horror yang perspektifnya third person side scrolling dilengkapi dengan Dynamic Difficulty Adjustment agar tidak monoton dan dapat menyesuaikan tingkat kesulitan tiap level yang ada. Dengan memanfaatkan emosi pemain dan pengaturan Dynamic Difficulty Adjustment, konten game tidak akan monoton dan dapat menyesuaikan level dengan performa pemainnya.

Penelitian ini bertujuan untuk meningkatkan kualitas bermain pemain game horror dengan memanfaatkan penyesuaian rintangan pada terdapat pada level. Penyesuaian dilakukan dengan mengolah data emosi wajah pemain selama sesi bermain dijalankan. Metodologi yang digunakan selama penelitian yaitu waterfall, dimana semua proses harus dilakukan secara sekuensial dari pembuatan dasar game hingga pengolahan data dari library MoodME dan kemudian dilakukan testing White Box dan Black Box. Game dievaluasi dengan menggunakan kuesioner yang diberikan kepada pemain yang telah memainkan game yang dapat menyesuaikan rancangan rintangan. Kuesioner dirancang menggunakan UEQ yang berfokus untuk mengukur user experience yang diperlukan untuk mengukur sejauh mana game dapat menyesuaikan rintangan terhadap performa pemainnya serta daya tarik game yang dirancang.

Berdasarkan data kuesioner yang terdiri dari 30 orang, menunjukkan bahwa penggunaan konsep pengaturan rintangan yang dapat menyesuaikan tingkat kesulitan berdasarkan ekspresi wajah pemain telah berhasil menarik minat pemain secara berulang (mean daya tarik = 1,59). Meskipun demikian, terdapat kebutuhan untuk memberikan penjelasan lebih lanjut tentang tujuan dan fungsi pengaturan rintangan berdasarkan emosi pemain (mean kejelasan = 1,14), serta memastikan ketepatan (mean ketepatan = 1,32) dan efisiensi (mean efisiensi = 1,47) dalam menyesuaikan tingkat kesulitan dengan performa pemain. Penggunaan rintangan yang dapat menyesuaikan pemain berhasil menstimulasi (mean stimulasi = 1,71) pemain untuk melanjutkan permainan hingga selesai. Fitur penyesuaian rintangan berdasarkan skor dan emosi pemain dinilai inovatif dan terbaharukan (mean kebaruan = 1,45).

**Kata Kunci:** Game Horor 2D, Pemanfaatan Emosi, Pengalaman Bermain, Rintangan Dinamis, Unity.

# HORROR SIDE-SCROLLING GAME OBSTACLES ADJUSTMENT BASED ON THE PLAYER'S FACIAL EXPRESSIONS USING MOODME UNITY LIBRARY

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## ABSTRACT

The game has various genres, one of which is horror. The horror game adopts a third-person side-scrolling perspective and is equipped with Dynamic Difficulty Adjustment to prevent monotony and adjust the difficulty level of each level. By leveraging player emotions and the Dynamic Difficulty Adjustment system, the game's content remains engaging and adapts the difficulty level based on the player's performance.

This research aims to enhance the quality of horror game players' experience by adjusting the obstacles present in the game levels. The adjustments are made by analyzing the facial emotional data of players during gaming sessions. The methodology employed in this research is the waterfall model, where all processes must be carried out sequentially, starting from the basic game creation to processing data from the MoodME library, followed by White Box and Black Box testing. The game is evaluated using a questionnaire given to players who have experienced the game with dynamic obstacle designs. The questionnaire was designed using UEQ, which focuses on measuring the user experience needed to gauge how well the game can adapt obstacles to player performance and the attractiveness of the game design.

Based on questionnaire data from 30 individuals, it shows that the use of obstacle adjustment concepts that can adapt difficulty levels based on players' facial expressions has successfully attracted players repeatedly (mean attractiveness = 1.59). However, there is a need to provide further explanation about the purpose and function of obstacle adjustments based on player emotions (mean clarity = 1.14), as well as ensuring accuracy (mean precision = 1.32) and efficiency (mean efficiency = 1.47) in adjusting difficulty levels to player performance. The use of obstacles that can adapt to players has successfully stimulated (mean stimulation = 1.71) players to continue playing until completion. The feature of adjusting obstacles based on player scores and emotions is considered innovative and up-to-date (mean novelty = 1.45).

**Keyword:** Horror Game 2D, Utilization of emotions, Playing Experience, Dynamic Obstacle, Unity.