

CHAPTER I INTRODUCTION

1.1 Background

In the Republic of Indonesia Law Number 12 of 2021, students are defined as learners in higher education institutions. They are a group of individuals engaged in academic activities and officially registered in a public or private university or an equivalent institution, aiming to acquire knowledge and obtain an educational degree¹. Universitas Darussalam Gontor is a university that implements a boarding system designed to ensure effective and efficient learning. In addition to the boarding system, it also utilizes a bilingual approach, incorporating Arabic and English as mediums for teaching and communication between lecturers and students.

Universitas Darussalam Gontor is divided into two campuses: Universitas Darussalam Gontor Male Campus and Universitas Darussalam Gontor Female Campus. It comprises seven faculties: Tarbiyah, Ushuluddin, Sharia, Economics and Management, Humanities, Science and Technology, and Health Sciences. The male campus offers 17 study programs, including Arabic Language Education, Islamic Religious Education, English Language Teaching, Quranic Sciences and Tafsir, Islamic Theology and Philosophy, Comparative Religion, Comparative Jurisprudence, Sharia Economic Law, Islamic Economics, Business Management, International Relations, Communication Studies, Informatics Engineering, Agrotechnology, Agricultural Industrial Engineering, Occupational Safety and Health, and Medicine. Meanwhile, the female campus offers 15 study programs, including Arabic Language Education, Islamic Religious Education, English Language Teaching, Quranic Sciences and Tafsir, Islamic Theology and Philosophy, Comparative Jurisprudence, Sharia Economic Law, Islamic Economics, Business Management, International Relations, Communication Studies, Informatics Engineering, Agrotechnology, Pharmacy, and Nutrition. The activities and structures of these two campuses differ significantly. Some activities conducted in the male campus are not implemented in the female campus, and vice versa. Additionally, the number of students varies between the two campuses. The

¹ Silvina Noviyanti Fuji Pramulia, Mayang Sari Munthe, Yusuf Andreansyah, Syahrial, "Jurnal Pendidikan Dan Konseling," *Jurnal Pendidikan Dan Konseling* 5, no. 1 (2023): 4093–96.

seventh-semester female students in the female campus outnumber those in the male campus, with approximately 400 female students enrolled².

In the process of pursuing education, female students often face significant demands that can trigger stress and heightened emotional states. Various surveys have revealed that the current generation experiences more emotional challenges, tending to be lonelier, more withdrawn, easily anxious, nervous, impulsive, and more aggressive than previous generations³. Stress itself is a non-specific bodily response to situations experienced by individuals, caused by an imbalance between their capacity to handle occurring problems. Among students, academic demands are one of the main causes of stress. This is particularly evident among final-year students or those working on their theses, who often experience physical exhaustion, such as illness and acne outbreaks on the forehead, as well as mental fatigue, such as lack of concentration, excessive anxiety, and impulsivity⁴. These stressors are not solely caused by environmental factors but also by the overwhelming pressure and workload that divide students' focus between their academic tasks and thesis. Moreover, excessive anxiety among students can also arise when they see peers or close friends making more progress than themselves in thesis preparation or other aspects⁵.

A thesis is a term used in Indonesia to describe a scientific written work that presents research findings. It discusses a specific problem or phenomenon within a particular field of study while adhering to established academic guidelines. A thesis serves as one of the first gateways to the future after leaving the academic environment of a university. As mentioned earlier, many students experience stress during the thesis-writing process. Previous studies have shown that approximately

² Yulia Rahmawati Zain, Universitas Islam, and Negeri Sunan, "Pondok Modern Darussalam Gontor Ponorogo," *Id. Wikipedia*, no. November (2018): 175–81.

³ Alvi Ratna Yuliana, Sri Endang Pujiastuti, and Elis Hartati, "Efektifitas Terapi Musik Klasik Monzat Dalam Meningkatkan Kecerdasan Emosi Pada Anak Sekolah Usia Dasar," *Jurnal Keperawatan Dan Kesehatan Masyarakat Cendekia Utama* 9, no. 1 (2020): 46, <https://doi.org/10.31596/jcu.v9i1.514>.

⁴ Ade Chita Putri Harahap, Dinda Permatasari Harahap, and Samsul Rivai Harahap, "Analisis Tingkat Stres Akademik Pada Mahasiswa Selama Pembelajaran Jarak Jauh Dimasa Covid-19," *Biblio Couns: Jurnal Kajian Konseling Dan Pendidikan* 3, no. 1 (2020): 10–14, <https://doi.org/10.30596/bibliocouns.v3i1.4804>.

⁵ W Kurniawti and R Setyaningsih, "Manajemen Stress Pada Mahasiswa Tingkat Akhir Dalam Penyusunan Skripsi," *Jurnal An-Nur: Kajian Pendidikan Dan Ilmu Keislaman* 5, no. 3 (2020): 248–53.

79% of suicide attempts and health disorders are caused by stress during the prime learning years. Additionally, more than 264 million people suffer from stress leading to depression, and around 800,000 people die by suicide. Field data also supports this concern. A survey conducted by the author on 340 female students revealed that more than 140 students felt significantly stressed while working on their thesis, and around 100 students reported experiencing extreme stress due to their thesis work. To prevent students from suffering excessive stress caused by thesis writing or final projects, there must be a diversion activity to help them maintain a fresh mind and mental well-being. One effective way to alleviate stress is by listening to music, which serves as a form of relaxation and mental relief for students.

Music is a form of art that reflects the culture of society, and to this day, it has become an integral part of daily life⁶, it is a branch of the arts that involves a sequence of notes and sounds that combine and have a temporal relationship to create a composition that eventually achieves unity and continuity. Various genres of music have emerged within society, ranging from classical music, pop music, dangdut, rock music, to EDM. Music serves as a reflection of an individual's or society's emotions, representing the human creative and emotional responses to life and the world⁷. There are three key elements in music that contribute to the balance of the brain: melody, rhythm, and timbre (tone color). These elements are present in all music genres. Previous research has shown that music can stimulate a child's intelligence even during fetal development, with classical music being one example. The human brain contains receptors (signal receivers) that can recognize music even during pregnancy, despite the brain's limited development at that stage. Music, in this context, acts as a stimulant, helping to accelerate and promote the growth of the developing brain.⁸

However, as we know, there are various differences of opinion among scholars regarding the permissibility of music, singing, and the arts. The basis for

⁶ Johaness Fernandes Andry and Calvin Tjee, "Analisis Minat Mahasiswa Mendengarkan Aplikasi Musik Berbayar Dan Unduhan Musik Gratis," *JBASE - Journal of Business and Audit Information Systems* 2, no. 2 (2019): 9–15, <https://doi.org/10.30813/jbase.v2i2.1727>.

⁷ Yuliana, Pujiastuti, and Hartati, "Efektifitas Terapi Musik Klasik Monzat Dalam Meningkatkan Kecerdasan Emosi Pada Anak Sekolah Usia Dasar."

⁸ Yuliana, Pujiastuti, and Hartati.

the permissibility of music, singing, and the arts refers to two works: *Ilha'Ulum al-Din* by Imam al-Ghazali (450-505 H / 1058-1111 AD) and *al-Fiqh 'al-Madhahib al-Arba'ah* by Sheikh 'Abd al-Rahman al-Jaziri (1299-1360 H / 1882-1941 AD), where he discusses :

مَنْ لَمْ يُحَرِّكْهُ الرِّبِيعُ وَأَزْهَارُهُ، وَالْعُودُ وَأَوْتَارُهُ، فَهُوَ فَاسِدُ الْمِرَاجِ، لَيْسَ لَهُ عَلاَجٌ

Which means, "A person whose soul is not moved by the breeze, flowers, or the sound of a flute in the spring is someone who has lost a soul that is hard to heal." The explanation of this passage suggests that someone who does not feel a vibration, even from a melody, is considered to have a dead soul. In addition to Al-Ghazali, Abu Thalib Al-Makki also stated that the scholars of Hijaz (Makkah and Madinah) would always listen to songs on significant days of the year, such as the days when Allah commanded His name to be mentioned, like during the days of Tashriq⁹. Some studies explain that in Islam, art is not prohibited as long as it contains Islamic values and does not contradict Islamic teachings, because art is a means to achieve good purposes. This is reflected in the following verse from the Quran:

فَاقْصِرْ وَجْهَكَ لِلدِّينِ حَنِيفًا ۚ فِطْرَتَ اللَّهِ الَّتِي فَطَرَ النَّاسَ عَلَيْهَا ۚ لَا تَبْدِيلَ لِخَلْقِ اللَّهِ ۚ ذَٰلِكَ الدِّينُ الْقَيِّمُ وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ

Which means, "So turn your face toward the religion of Allah, [as a Muslim], the nature of Allah upon which He has created mankind. There is no changing the creation of Allah. That is the correct religion, but most people do not know." (QS: Ar-Rum: 30). The explanation of this verse indicates that *fitrah* refers to the innate nature bestowed by Allah upon humans, including the realm of art. Art is also a *fitrah* that comes from within humans, making them distinct from other creatures of Allah. This study also explains that art in Islam, such as music, singing, or songs, is not always haram. It depends on the intention and purpose behind it. If the intention and purpose are for good, and do not contradict the laws of Allah in

⁹ Ahmad ali md, "Pandangan Islam Musik Dan Bernyanyi," Nuonline, 2022.

terms of lyrics, melodies, or musical instruments, then it is permissible. As long as the intention is good and directed toward something beneficial, it will be allowed. Therefore, using music to help calm the soul or relax the mind can make music permissible (*mubah*)¹⁰. Art comes in various forms. If we look at the legal aspect of singing accompanied by music, it is permissible as long as it uses permissible instruments and the lyrics do not contain immoral content or falsehoods about Allah¹¹. It can be concluded that there are two viewpoints in the hadith regarding music: one allows it, while the other forbids it. As long as the music is good and beneficial, it is permissible to use. As long as the lyrics, instruments, performance style, and the effects of listening to or playing the music do not contradict Islam, the music is permissible¹².

From the explanation above, one solution to help alleviate stress among female students from their thesis work is through music. In this study, this solution will be turned into data that will then be processed using a machine learning model to generate accuracy and data validation that shows how music can help reduce stress levels for female students working on their thesis. The machine learning models that will be used in this study are SVM (Support Vector Machine) and Random Forest. The reason the researcher is using these two machine learning models is because SVM is a machine learning algorithm used to solve classification and regression problems. SVM works based on Structural Risk Minimization (SRM) with the goal of processing data into a hyperplane or decision boundary, dividing the data into two categories by grouping cases according to their respective categories¹³. On the other hand, Random Forest is a collection of classifiers that includes various types of decision trees, with many random forests used in the method. This approach helps interpret results and aids in understanding which

¹⁰ Akhmad Akromusyuhada, "Seni Dalam Perspektif Al Quran Dan Hadist," *Jurnal Tahdzibi* 3, no. 1 (2018): 1–6, <https://doi.org/10.24853/tahdzibi.3.1.1-6>.

¹¹ Ulfatus Syarifah, "Lagu Islami Sebagai Media Dakwah Dalam Pandangan Syaifi'iyah," *Wasathiyyah* 4, no. 1 (2022): 123–41, <https://doi.org/10.58470/wasathiyyah.v4i1.28>.

¹² Muhammad Abdul Aziz, "Hadis-Hadis Tentang Seni Musik," *Skripsi Universitas Islam Negeri Sunan Kalijaga*, 2008, 1–106.

¹³ Almira Van Fadhila et al., "Implementasi Metode Machine Learning Untuk Mendeteksi Tingkat Stres Manusia Berdasarkan Kualitas Tidur," *Seminar Nasional Mahasiswa Ilmu Komputer Dan Aplikasinya (SENAMIKA)* 4, no. 1 (2023): 130–43.

elements most influence the problem being studied, using the appropriate stages in the process¹⁴.

The proposed methods in this study, SVM and Random Forest, are used to classify data obtained from questionnaires, aiming to provide accurate results for reducing stress. By comparing the accuracies of these methods, this study seeks to identify the most effective and accurate model for analyzing data that can benefit not only the researcher but also the female students in their 7th semester at Universitas Darussalam Gontor.

1.2 Problem Formulation

The research problem formulated based on the background is as follows:

1. Lack of identification regarding the effectiveness of different music genres in helping to reduce stress levels among final-year female students at Universitas Darussalam Gontor during their thesis-writing period.
2. Lack of identification of the most effective method between Support Vector Machine (SVM) and Random Forest in analyzing the impact of music on stress reduction among seventh-semester female students at Universitas Darussalam Gontor during their thesis-writing period.

1.3 Research Objectives

The objectives of this study, based on the formulated research problems, are as follows:

1. To identify the influence of music, particularly specific music genres, in helping to reduce stress levels among female students at Universitas Darussalam Gontor during their thesis-writing period.
2. To compare the effectiveness of SVM and Random Forest in analyzing the impact of music on stress reduction among seventh-semester female students at Universitas Darussalam Gontor during their thesis-writing period.

1.4 Scope of the Study

To ensure the research remains focused and well-directed, the researcher has set the following limitations:

¹⁴ Zikri Hadryan Nst et al., "Perbandingan Algoritma Random Forest Dan K-Nearest," *Jurnal Ilmiah Beltik* 15, no. 01 (2024): 31–37.

1. Data collection is conducted only on final-year female students at Universitas Darussalam Gontor, Mantingan Campus, Ngawi, Indonesia, from June 1, 2024, to August 31, 2024.
2. Data is collected exclusively through questionnaires distributed via Google Forms. The questionnaire focuses only on emotional changes and stress levels before, during, and after listening to music.
3. The study only considers common music genres as variables in the research.
4. This research only focuses on comparing the accuracy levels of the SVM and Random Forest algorithms in measuring the impact of music on stress reduction among final-year female students at Universitas Darussalam Gontor.
5. The programming language used in this research is Python, and the analysis is conducted using Google Collab.

1.5 Research Benefits

This research is expected to benefit not only the researcher but also society at large. Below are the anticipated benefits of this study:

1. **Benefits for the Researcher** This study will provide the researcher with new experiences and insights into the use of SVM and Random Forest methods in sentiment analysis. It is hoped that this will allow the researcher to apply these methods to other types of analyses in future research. Additionally, it provides an opportunity to enhance the researcher's knowledge and skills, contributing to the expected outcomes of this study.
2. **Benefits for the University** The findings of this study are expected to serve as a benchmark for understanding emotional levels in female students, particularly those in their 7th semester. This research can also serve as a reference for the university, specifically for the Informatics Engineering program, in future research related to data analysis.
3. **Benefits for Other Researchers** The results of this study are anticipated to be a valuable reference for other researchers working on similar topics, facilitating the generation of new insights and research in related fields.
4. **Benefits for Society** The research aims to educate the public about how music can serve as a therapeutic tool to address emotional issues, providing

a new perspective on how music can help reduce stress and contribute to mental well-being.

