

# **MUSICALE: A PLATFORM FOR PIANO SCALE LEARNING**

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## Abstract

Music education provides benefits such as cognitive skill enhancement and performance improvements in many other subjects. This has not only drawn the attention of many researchers but also has moved towards using innovative technology-based applications rather than traditional frames. Piano learning is one of the widely researched areas in the domain of music education. This is mainly due to its low learning curve and its competence to deliver guidance to understand complex concepts of music.

Piano scales are considered as a major factor effecting the development of piano playing skills and understanding the building block of music as well as key signatures. According to existing work carried out in the domain of music education, researchers have not yet proposed a platform which deviates from traditional approaches to help students learn piano scales. Though many researchers have come up with solutions to address limitations such as lack of resources and lack of musical experiences of teachers, none of the approaches could address the issues faced by students when learning piano scales.

The developed “Musicale” platform is a mobile application offering students an environment to learn piano scales through playing music material in any scale which can develop the knowledge of music on all degrees. Platform is build using Unity and has used many cutting-edge approaches to provide better performance when generating a song in different scales. This platform offers piano scale learning lessons for students along with a gamification technique and a notification procedure which differs from their daily routines to keep them motivated throughout their learning process.

Platform was thoroughly tested and the success rate it gained satisfied the domain and technical experts who contributed to evaluate the system. Feedback and suggestions they provided helped in coming up with many approaches for future enhancements and further investigations.

**Key words:** Piano scale learning