

Violin Tutor

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Abstract

Learning an instrument like the violin can be expensive due to the high cost of lessons. Even if a student cuts down on these lessons to save money, they can be hindered by a lack of knowledge to tune their instrument correctly, and a lack of knowledge surrounding finger placements for learning scales, something that is crucial to the development of a player.

Current technology does not provide a useful application which is mobile, free, easy to use, this project sought to develop an application which would act as a solution. It did so by taking advantage of smartphone technology, predominately through the widely used Android operating system.

Research into pitch detection methods found the Yin algorithm to be the most suitable in the creation of a fast and accurate tuner. This newly created tuning facility used in conjunction with a diagrammatic representation of scales, meant the creation of an application that provides users with two functions that were previously separate. The Violin Tutor application can provide players the ability to undertake independent study with verification on technique and tuning outside of lesson time. With further development the possibility of grading a user's playing and expansion to incorporate sheet music could be implemented in the future. With more scales added to the application, publication onto the Android play store will be pursued.