NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE

School of Computer Science and Engineering
College of Engineering

Sonification of Geometry

Digital Recreation of Musical Notes and Applications in Virtual Reality

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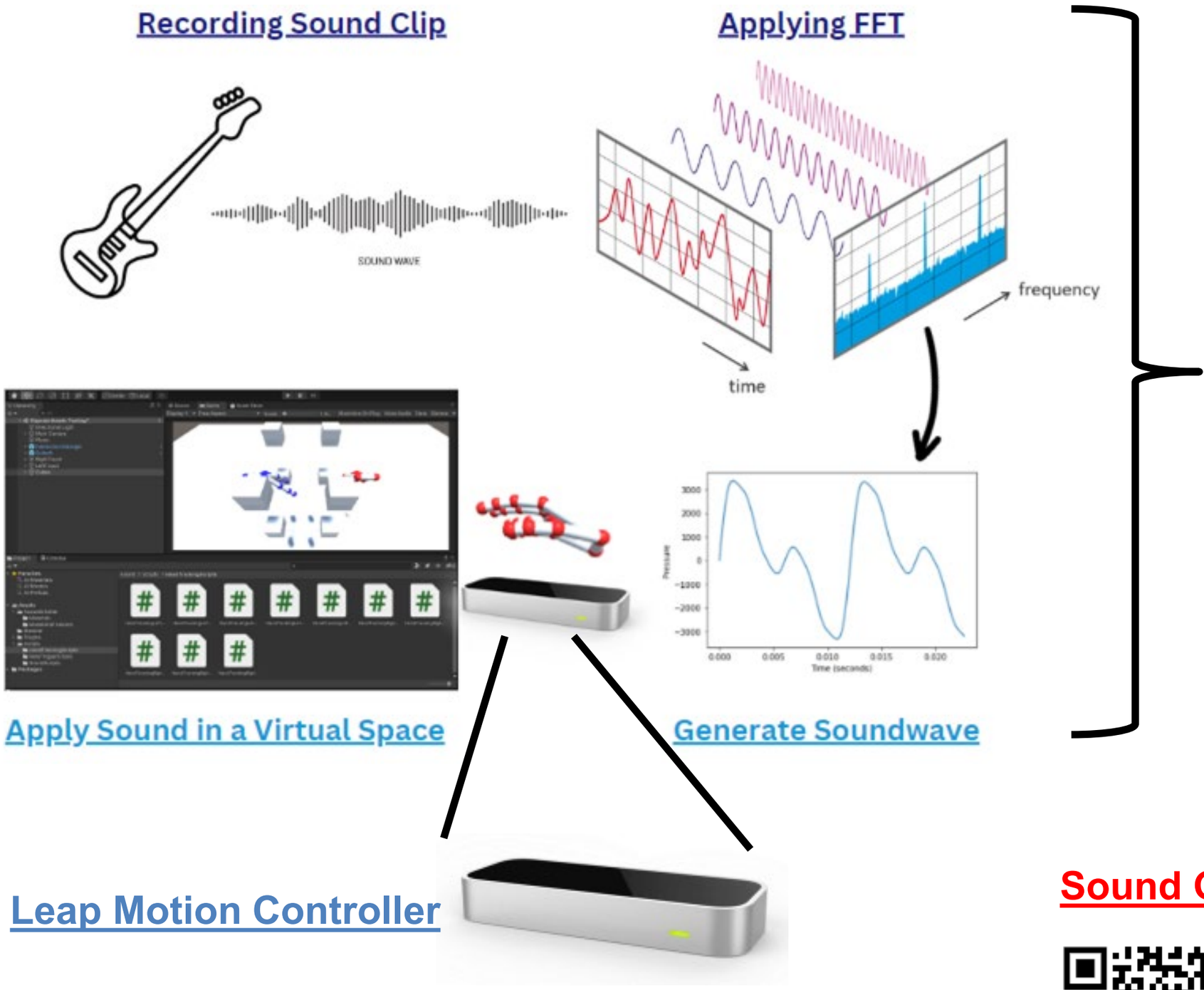
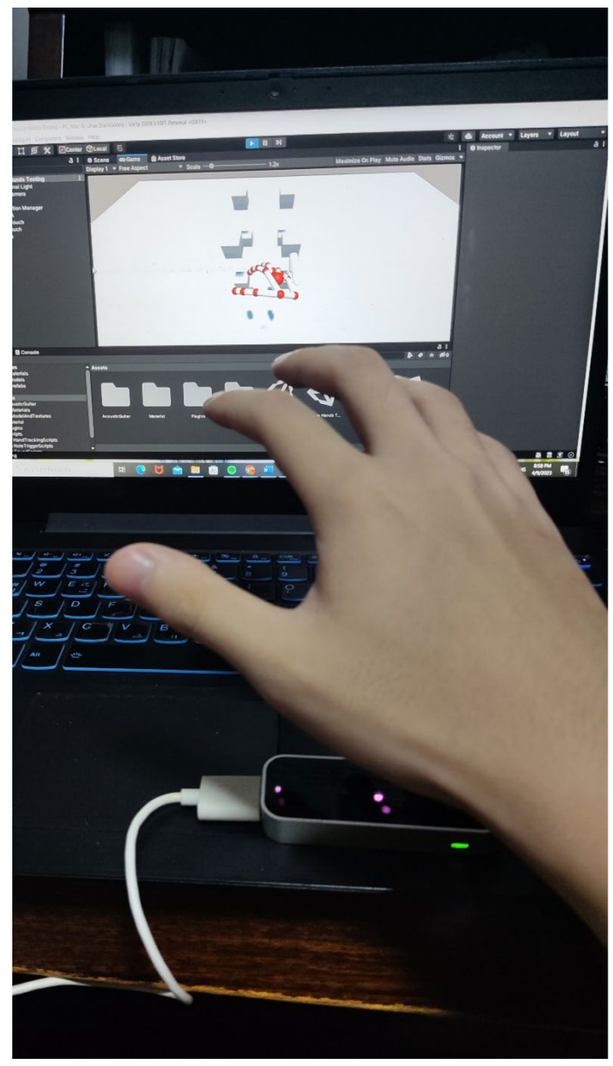
Project Objective:

This project aims to generate pleasant sound notes by utilizing the **Fast Fourier Transform (FFT)** method to analyze the sound waves of a real-life guitar and reproduce it at whatever frequency is required. We also explore ways that these sounds can be interacted with in a virtual environment, with the user utilizing hand-tracking software to interact with various shapes placed in a variety of arrangements. The project aims to be a foundation for the generation of other pleasant sounding notes from other instruments, as well as possible further applications involving virtual space and sound.





Sound Generation Results

Scan the QR code for samples and a more detailed explanation!

The Leap Motion Controller is an optical hand tracking module that captures the movements of your hands with unparalleled accuracy.