

Visualisation of Audio using Dot Matrix Display

Submitted by

Roopesh O R
Prabhath C S
Pranav Praveen



Division of Electronics Engineering
School of Engineering
Cochin University of Science and Technology
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Abstract

From simple music player applications to concerts, audio visualization enhances the ambience and overall experience of the enjoyer. In this project we try to replicate a simpler version of such systems using Arduino UNO development board, 32*8 led dot matrix display, and few small components. After some preprocessing, an audio signal of our interest is fed to one of the analogue pin of arduino. This signal is processed using "ArduinoFFT" library which splits audio into discrete chunks and performs FFT on it. Resulting frequency spectrum is then again processed and scaled down to match the width and height of led display and is displayed on it. In the end, we try to add more customizations such as different "display modes", etc.

Implementation

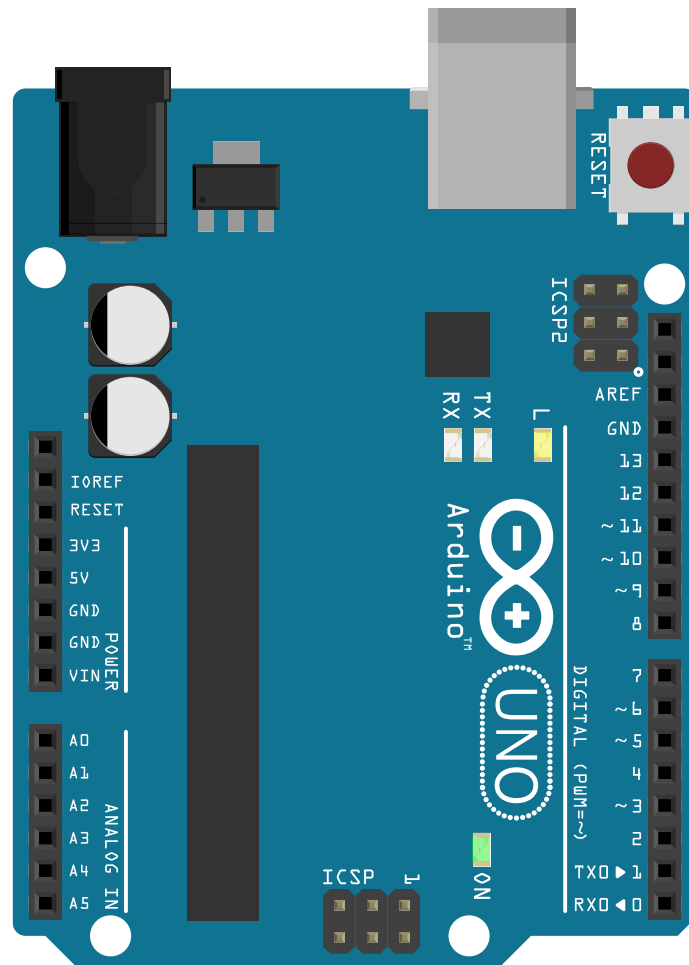
Introduction

dfdsfsas

Block Diagram

dggds

Arduino UNO



Hardware

Program

```
void setup () {  
    pinMode(12, LOW);  
}  
  
void loop () {  
  
}
```

Conclusion

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