Requirements

# Non-Functional Requirements

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| **No.** | **Requirement** | **User Story** | **Level** |
| **1.0** | The system should be able to open a stream to interpret incoming audio data. |  | Mandatory |
| **2.0** | The system should be able to store a stream of sound data as appropriate for internal processing. |  | Mandatory |
| **3.0** | The system should be able to analyse sound data by distinguishing individual notes. |  | Mandatory |
| **4.0** | The system should be able to identify the correct pitch for (monophonic) notes played on a standard piano. |  | Mandatory |
| **5.0** | The system should be able to distinguish the length and duration of individual notes. |  | Mandatory |
| **6.0** | The system should be able to translate identified notes into a MIDI file format. |  | Mandatory |

# Functional Requirements

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| **No.** | **Requirement** | **User Story** | **Level** |
| **7.0** | The system should allow the user to commence and stop recording. |  | Mandatory |
| **8.0** | The system could allow the user to specify the time signature and tempo they intend to play at. |  | Extra |
| **9.0** | The system could allow the user to specify the key they intend to play in. |  | Extra |
| **10.0** | The system should be able to generate a file that can be imported directly to popular notation software, such as MuseScore or Sibelius. |  | Mandatory |