**Milestones**

Planning - We will create a report and presentation mapping out our goals

Development (Individual features) - We will individually start development on the UI, Analysis Engine, Synthesis Engine, and Music Packaging components of the project.

Integration of all features - We will integrate the four components of the project together

Testing - We will test the application, fix bugs, and refactor code.

Documentation - We will write documentation for the application.

Open-Sourcing - We will will open source the project.

**Timeline**

|  |  |
| --- | --- |
| Task | Dates |
| Planning | 9/10/18 - 12/10/18 |
| Development of individual features | 1/14/19 - 2/15/19 |
| Integration of all features | 2/16/19 - 3/1/19 |
| Testing | 3/2/19 - 4/12/19 |
| Documentation | 4/13/19 - 4/22/19 |
| Open-Sourcing | 4/22/19 - 4/2619 |

**Effort Matrix**

(percentages for each task)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Thadeus | Grace | Eric | Braden |
| Research Musescore plugins. | 85 | 5 | 5 | 5 |
| Create a Musescore plugin that will allow the user to specify settings for the music they wish to generate and input musical snippets to act as a base for the generated music. | 85 | 5 | 5 | 5 |
| Integrate the plugin with music analyzer so that the so that the user’s inputs will be sent to the analyzer in order to generate music. | 85 | 5 | 5 | 5 |
| Test the plugin. | 85 | 5 | 5 | 5 |
| Document the plugin at <https://musescore.org/en/plugins> | 85 | 5 | 5 | 5 |
| Research tools and strategies for packaging musical pieces into midi files. | 5 | 5 | 85 | 5 |
| Implement a packaging technique, incorporating it into the existing musescore code base. | 5 | 5 | 85 | 5 |
| Test the implementation to ensure expected functionality. | 5 | 5 | 85 | 5 |
| Integrate the packager with other components of the Ihy project to validate that each component interfaces correctly with the other. | 5 | 5 | 85 | 5 |
| Document design practices and decisions throughout the process researching, developing, testing and integrating. | 5 | 5 | 85 | 5 |
| Research tools and strategies for analyzing components of musical pieces. | 5 | 85 | 5 | 5 |
| Specify and implement a music analyzer design strategy, incorporating it into the existing musescore code base. | 5 | 85 | 5 | 5 |
| Test the implementation of the music analyzer to ensure expected functionality. | 5 | 85 | 5 | 5 |
| Integrate the music analyzer with other components of the Ihy project to validate that each component interfaces correctly with the other. | 5 | 85 | 5 | 5 |
| Document design practices and decisions throughout the process researching, developing, testing and integrating. | 5 | 85 | 5 | 5 |
| Research existing generation strategies. | 5 | 5 | 5 | 85 |
| Design and implement synthesis of new music given analysis of existing music and generation attributes. | 5 | 5 | 5 | 85 |
| Test that generated scores are within constraints defined by the attributes. | 5 | 5 | 5 | 85 |
| Integrate into rest of project. Consider approaches: within Musescore plugin environment or external? | 5 | 5 | 5 | 85 |
| Document the generation process, including any core abstractions used. | 5 | 5 | 5 | 85 |