**Capstone Weekly Project Summary**

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| Week 1 | Project Status: N/A (initial meeting) |
| Tasks Completed/New Functionality | * Simple bullets describing completed tasks go here * More tasks… |
| Comments | A sentence or two describing additional activities, success, setbacks, or learning |

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| Week 2 | Project Status: Green |
| Tasks Completed/New Functionality | * Complete Midi file interpreter * Research for Machine Learning * Idea for how to use Machine Learning in the application. |
| Comments | This week’s main focus was on parsing data out of a given midi file. |

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| Week 3 | Project Status: Yellow |
| Tasks Completed/New Functionality | * Created way to compare notes both in a vertical manner as well as horizontal. * Completed scale detector |
| Comments | Had trouble pulling out notes and comparing them. However, I believe I’m on the right track to getting what I need. |

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| Week 4 | Project Status: Red |
| Tasks Completed/New Functionality | * Progression on MIDI note duration |
| Comments | Note durations are a key element in determining the beats per minute and will also be a important value to consider when determining eras. |

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| Week 5 | Project Status: Red |
| Tasks Completed/New Functionality | * Completed finding duration of Midi Note * Linear regression, machine learning algorithm to determine era. * Created list of variables (BPM, count of notes, etc.) that be used in linear regression. |
| Comments | I personally want to use linear regression to determine where a song best fits to an era.  Also, finally able to determine the duration of a note. Hard to find time to work being a finals week. |

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| Week 6 | Project Status: Red |
| Tasks Completed/New Functionality | * Midi File Data Centralization * Research on Linear Regression |
| Comments | Created an object to contain all the information I need to parse through to determine and era. Not certain if I’m going to use linear regression to do machine learning. |

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| Week 7 | Project Status: Red |
| Tasks Completed/New Functionality | * Decided to use clustering algorithm * Made algorithm for predicting era |
| Comments | Decided to use clustering algorithm to detect era because I’m to assign certain areas to certain variables. This will give an unsupervised approach to machine learning and seemed to make the most sense. |

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| Week 8 | Project Status: Red |
| Tasks Completed/New Functionality | * Finished Clustering Algorithm |
| Comments | Completed the clustering algorithm, but results show inaccuracies and it seems really buggy. It is clustering, but results are not acceptable. |

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| Week 9 | Project Status: Red |
| Tasks Completed/New Functionality | * Clustering Algorithm Working |
| Comments | Finding a lot of logic errors when comparing notes and other values. Fixed a few, and accuracy is improving, however results are still inadequate. |

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| Week 10 | Project Status: N/A (presentation week) |
| Tasks Completed/New Functionality |  |
| Comments |  |