**MATH/STAT/DATA 4395: SENIOR PROJECT**

A project on a mathematics/statistics related topic under the guidance of a member of the Mathematics and Statistics faculty. A formal written report and an oral presentation are required. *(This form is needed when the student takes Math/Stat/Data 4395 as an independent study course.)*

*Prerequisite:* Senior standing, formal approval by the prospective project advisor and the department chair.

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| **Student Name:** | Francisco Ramirez | | | |
| **Student ID:** | 1147552 | Major: | | Data Science |
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| **Semester:** | Spring 2022 | CRN: |  | |

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| **Senior Project Advisor:** | Randy Davila |
| **Committee Member 1:** |  |
| **Committee Member 2:** |  |

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| **Project Title** | AI Music |
| **Project Description** | In the last few years, we have seen great advancements in neural networks and the applications of it. From medicine to agriculture, we have seen the benefits of using ai to better perform task that would otherwise be very difficult to accomplish. One field that ai has created great strides in is the arts. Neural networks are now used to create music, paint art, develop stories and so on. But just how far can we take this new technology? In my project, I will discuss the advancement of GNN and autoencoders and their use in generating new music. Specifically, I will investigate if it is possible to replicate a style of music based on a given artist and not just a genre. We will utilize elements of music such as tempo, rhythm, pitch, timbre, dynamics, melody, and harmony to reproduce sound with similar characteristics. This project will dissect sound and could in theory be used to match sounds to their own respective producing source. |

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| **Project Advisor Signature:** |  | **Date** |  |
| **Department Chair Signature:** |  | **Date** |  |

office@davidamos.dev  Email David explaining what we’re doing. Trust me, he’s friendly

[office@davidamos.dev](mailto:office@davidamos.dev)

package is build into the repl

when I open it up activate it every time activate .

Managing the package dependenicies

Bc the speed in which they are being developed one way to use these package is by using the julia package manager.

Write about it. And isolating packages using it

Think about towards data science

Headache and not knowing how to fix the problem. Think about the problems I encountered and write about it.

I didn’t know how to

What is the Julia is

Developing apps you Julia package manager

How to sync the link got