

# Nicolas Russo

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**INTRODUCTION:** I am currently a sophomore at the University of Miami where I am studying both computer and music engineering. I am extremely passionate about music technology, especially at the intersection of computer software and music creation. I have independently written several games, applications, and audio DSP plugins in an effort to learn new skills but also for the mere enjoyment that the creative process provides. I would like nothing more than to take the knowledge and skills I have attained, and build on them while gaining experience in the industry.

## EDUCATION:

*8/23 - Current*

**University of Miami**, Coral Gables, FL

- Music Engineering Technology and Computer Engineering
- GPA: 3.98

*7/22 - 8/22*

**Carnegie Mellon University**, Pittsburg, PA

- Attended a 6 week pre-college program modeled after the first semester of their Music Technology program
- Participated, performed, and arranged music for the Jazz Ensemble

## WORK EXPERIENCE:

*8/24 - Current*

University of Miami, Coral Gables, FL

**Teaching Assistant** - Introduction to Computer Programming

- Teach a weekly lab section where my responsibilities include keeping students on task, answering questions, and providing guidance
- Grade and provide feedback for students' lab work
- Facilitate one-on-one and group tutoring sessions
- Answer student questions both in person and via email

*6/23 - 8/23 and 6/24 - 8/24*

Shoreline Food Pantry, Clinton, CT

**Volunteer**

- Shopped for and picked up food from local businesses, stocked and organized shelves, packed bags of food, and distributed food to those in need

*6/23 - 8/23*

Levi's Strauss, Clinton, CT

**Sales Associate**

- Helped organize and fold clothes, stocked shelves, assisted customers, ran the cash registers, and helped close at the end of business

## SKILLS:

**Languages:** C++, C#, Python, Java, HTML/CSS

**Frameworks and APIs:** JUCE, PlugData, OpenGL, Twitch/YouTube API, Google Cloud API, Llama 3.1

**Software:** Unity, Visual Studio, Neovim, Cycling '74 Max, Blender, Adobe Creative Suite (Photoshop, Premiere, After Effects, Illustrator), Microsoft Office Suite, Google Suite

**Digital Audio Workstations:** Ableton Live, FL Studio, ProTools, Logic Pro X

**Operating Systems:** OSX, Windows, unix

## **COURSE WORK:**

### **Computer Engineering:**

- Intro to Programming (C++)
- Data Structures (C++)
- Algorithms (C++)
- Computer Programming (Java)
- Calculus I & II
- University Physics I

### **Music Engineering Technology:**

- Intro to Music Recording
- Recording Workshop (Live studio experience)
- Mixing Workshop
- Electric Circuit Theory and Lab
- Audio Electronics
- Audio for Visual and Interactive Media

## **OTHER ACHIEVEMENTS:**

### **C++, JUCE, and Max Plugins**, 2023

- Smart Clip is a plugin developed in JUCE using C++ that uses multiband limiting and clipping to create high-end preserving distortion.
- The 4/27 plugin was also made using JUCE, and uses an exponential equation and waveshaping techniques to create a smooth analog-sounding distortion.
- The Deep Pan plugin was made in Max4Live, and uses mid-side delays to create a deep panning effect to replace standard LCR mixes.

### **AI Language Game and Chatbot**, 2024

- The AI Language game uses Google Cloud's Speech-to-Text API to capture a user's sentence, sends it to a Large Language Model (Llama3.1) for translation, and plays the translated sentence via Google's Text-to-Speech API and PyGame.
- The ChatBot works similarly but uses a character description for its context instead of translation instructions.

### **MIDI Rhythm Game**, 2024

- This game takes a MIDI file as input, and builds a chart for the rhythm game component using the MIDI note data in real-time. Charts can thus be created and edited extremely quickly. Additionally, note data is also used to control the video effects such as screen shakes and drifts.

### **Omnicorum Project**, 2019 - Present

- Write, produce, and release songs in various genres of EDM including lofi, dubstep, drum and bass, and neuro funk
- Release songs through DistroKid to [Spotify](#), [Apple Music](#), [Amazon Music](#), and [YouTube](#)
- Create all music videos and album artwork