

# GABRIEL BUXO

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## EDUCATION

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### RIT, CS Major, Bachelors of Science

2021 —

- Software Engineering
- Computer Science 1 and 2
- Computer Science Theory
- Analysis of Algorithms
- Concepts of Parallel and Distributed Systems
- Discrete Mathematics
- Probability and Statistics
- Multivariable and Vector Calculus
- Differential Equations

## PROJECTS

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### Portfolio Website

I made this website as a second resume to be able to show skills in design and webdev as well as show other Javascript projects and algorithms I have worked on. Here I have a boid simulation, a NEAT (Neuro Evolution of Augmented Topologies) evolutionary algorithm powering a set of neural networks to learn how to play a flappy bird clone all written from scratch, an A\* pathfinding and soon a blog. I am very pleased to have this website to be able to show off my work and demonstrate some of my skills.

### CRUD Todo App

Made a CRUD App for keeping track of various todo lists using svelte and a postgresql database. This app was also made to be an optimized progressive web app with offline usage in mind. I made this project while learning svelte. I am proud of features such as robust security, debounced api calls to limit spam and cost, and it being an offline available PWA that can be downloaded on pc and mobile.

### From Scratch Neural Network

I made this project because I am passionate about AI and while I have made one in the past I wanted to upgrade its design to be more extendable. I did this by making atomic layers that are composable into larger layers all containing the same feedforward and backpropagate methods. In this project I got to apply object oriented principles.

### Music Maker

In this project I made a command line interface for making songs written entirely in rust. In this project songs can be saved and loaded from a custom file format as well as exported as a wav file.

## SKILLS

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- Languages: Javascript, Typescript, C, Java, Rust, Godot
- Tools: Docker, Redis, SQL, AWS, Puppeteer, Jest, Linux, Tailwind

## EXTRACURRICULAR ACTIVITIES

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### **Club Gymnastics**

Casual practitioner of gymnastics for 4 year. I started my own student organization at RIT called gymnastics underground for students in club gymnastics that wanted to engage in extra practice.

### **Dungeons and Dragons Game Master**

I have been lead multiple campaigns for DnD where I crafted careful and engaging narratives for large groups of player for countless hours of gameplay including a multi-year campaign.

## ACHIEVEMENTS

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- 1500 SAT
- 5/5 APs for Physics 1, Calc AB, Calc BC
- Merit Award for top .1% PSAT