



# Xander Kehoe

## Professional Summary

Computer engineering student with a variety of experience in computer science related topics.

## Projects

### Neural Net Class

- Designed my own Python neural net class from scratch.
- Serves as a building block for deep learning AI projects.

### Electric Turbine Blade Design Generator

- Worked with a mechanical engineer to design a genetic algorithm in Java to optimize an electric turbine blade.
- Overshot optimistic thrust goal of 2.5lbs to 2.99lbs (20% increase)

### Economy Simulator

- A complete economic simulator made in Java.
- Supports implementation of various economic policies such as wealth redistribution and minimum wage.

### Space Engineers Programming

- Made multiple C# Scripts made for use in the physics-based game, Space Engineers.
- Spaceport Manager: Automates management of an organized spaceport. Utilizes matrix algebra and vector analysis to perform automated docking operations.
- Laser Antenna Communication Network: Custom built networking protocol for laser antennas to allow for intergrid communication over long distances.
- Dynamic Braking: Uses physics and vector analysis to control braking in between points in space.

### Swarm A\* Pathfinding

- A modified A\* pathfinding algorithm made in Java for a more erratic looking behavior.
- Utilizes multi-threading and complex data structures to maximize performance.

### Arduino Motion Sensor

- Uses a PIR motion detector linked to an Arduino Uc to detect movement up to 6ft.
- Sends data over Bluetooth Serial Communication to interact with Python program running on main computer.

### Two Player Snake:

- Original Snake game, but now with two players!
- Made using OpenGL and LWJGL in Java.

## Contact Information

[xanmail99@gmail.com](mailto:xanmail99@gmail.com)

Chattanooga, TN.

## Website Portfolio

- [xanderkehoe.github.io](https://xanderkehoe.github.io)

## Skills

- |                       |               |
|-----------------------|---------------|
| • Java                | • C#          |
| • Python              | • C++         |
| • Assembly (x86)      | • JavaScript  |
| • Genetic Algorithms  | • MATLAB      |
| • Digital Circuits    | • Game Design |
| • Oscilloscopes       | • TensorFlow  |
| • Embedded Systems    | • Inventor    |
| • Visual Basic        | • Blender     |
| • Computer Networking | • Firewalls   |
| • Vector Analysis     | • Physics     |
| • Microsoft Office    | • Soldering   |

## Education

2021

University Of Tennessee - Chattanooga

Bachelor of Science: Computer Engineering

- GPA of 3.4

## Awards & Accomplishments

- GitHub Arctic Code Vault Contributor
- LeetCode Weekly Competition #197 Placed Top 10%
- Team Leader for my University Senior Project (Object Identification System using Neural Networks)
- Attended USNSCC Cyber Warfare and STEM week long trainings.
- Deans List for: Spring 2017, Fall 2018, Spring/Fall 2019