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.

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Website Portfolio

• xanderkehoe.github.io

Skills

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