

Nathan George

Education

Pursuing Major: **BA in Computer Science**

Expected: **Fall 2024**

University: **JB Speed School of Engineering, University of Louisville** 🇺🇸

Objective: **2023 Summer Internship**

Dates: **May 8th – August 18th**

Credits Completed: **73**

Contact

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Github: github.com/KosmosisDire

Linkedin: linkedin.com/in/nathang-dev

Website: nathang.dev

Skills

Programming

SQL Python C# C++
C Java JavaScript
HTML CSS Arduino
Machine Learning HLSL

Tools

Git Linux Visual Studio
nginx Android Studio
Unity Blender

Non-Technical

Logical Analysis Initiative
Learning Communication
Organization Details

Interests

Artificial Life Self-Sustaining Systems
Anthropology Programming Game Design
Video Games 3D Art Learning
Document Organization Music Composition
Piano Digital Art Baking

Work Experience

Data Structures TA

September 2022 — Current

Louisville, KY

- **Creating automatic grading software to build and test student submissions.**
- **Reduced the workload for grading and student assistance by at least 20x.**
- **Improved assignment readability for better communication of problem objectives to students.**

C++ Python C# Linux

General TA

August 2016 — January 2020

Candler, NC

- **Accelerated the grading process of physics, math, and Spanish assignments**
- **Assisted with lighting, sound, and IT work. Regularly communicated ideas from students to teachers.**

Communication Algebra Computer Systems

Personal Projects

Auto Piano Tiles

Personal

2021

- **Created a script to watch the computer screen and automatically play the game piano tiles**
- **Optimized it for speed and precision. It was immeasurably faster than a human.**

Python OpenCV

Natural Grapher

School

Github

2022



- **Open arbitrary .csv files into a clean data visualization UI.**
- **Apply aggregations and filters to data.**
- **Lead this project with a team.**
- **Implemented the UI, graphing systems, and data aggregations.**

Python pyqt Illustrator Collaboration Leadership

Mobile Wi-Fi Texting

Personal

2021

- **Designed a messaging app to send Wi-Fi texts using TCP.**
- **Developed a self-hosted relay server.**
- **Stored messages locally in an SQLite database.**

SQL Android Networking C#

Multiplayer Scrabble

Personal

Github

2022



- **Designed an online multiplayer scrabble-like game for Android and PC.**
- **Created a backend relay server so anyone can play together.**

Unity Networking C#

Particle Physics Engine

Personal

Github

Current



- **Coded a GPU accelerated physics sim supporting up to 1,000,000 particle-particle collisions in real-time.**
- **Used spacial partitioning to accelerate collision checks by 1000%.**
- **Planning to design an artificial life simulation using this as a base.**
- **Previous iterations had particle based organisms with neural networks.**

C# HLSL Machine Learning Algorithms

My Website

Personal

Current



- **Designed and built from scratch a portfolio website.**
- **Hosting it on a web server at my home using nginx**
- **Set up SSL so it can be accessed through HTTPS**
- **View it here: nathang.dev**

HTML CSS JavaScript nginx