Xavier X. Ruyle

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Education

University of Kansas *Lawrence, KS*
B.S. IN COMPUTER SCIENCE *Sept 2021 - Present*

- GPA: 4.0
- Honors: Dean's list every semester

Work Experience

Americo Financial Life and Annuity *Kansas City, MO*
IT INTERN *Jun. 2022 - Aug. 2022*

- Collaborated with IT team to decommission hardware across 4 floors of an office building.
- Imaged and deployed computers to associates in multiple departments, showing expertise in computer imaging and cross department communication.
- Utilized WSUS, Active Directory, and Microsoft Endpoint Configuration Manager during imaging process.
- Developed automation scripts to streamline imaging workflows, exhibiting familiarity with powershell and programming skills.
- Managed and administered the Netwrix software for auditing servers.

Projects

3D Graphics Voxel Engine *Source Code - Website*
C++, OPENGL, GLSL *April 2023 - July 2023*

- Designed an efficient engine which is able to render tens of millions of voxel cubes on screen at once. Each voxel is able to be dynamically interacted with, destroyed, and created. The scale of a world that can be created is infinite.
- Utilized Perlin Noise to generate infinite terrain. 3D noise was used to generate subterranean caves.
- Implemented a meshing algorithm where voxel faces not surrounded by air are culled.
- Optimized several algorithms by multithreading using std::async.
- Engineered an ambient occlusion implementation specific to voxel space.
- Built a model loading system using an open source ply parser known as hapPLY.

Bandcamp MP3 Download *Source Code*
PYTHON, MUTAGEN, YTMUSICAPI *April 2022 - July 2022*

- Provided a command line application for downloading and uploading songs with correct metadata from bandcamp.
- Utilized the open source module Mutagen to handle audio metadata once mp3 is downloaded.
- Automatized the process of uploading to YT Music by implementing the open source API ytmusicapi.

Maze Generator and Solver *Source Code*
PYTHON, PYGAME, DEPTH-FIRST SEARCH *Feb 2023 - March 2023*

- Implemented the depth-first search algorithm to display the generation and solve of a maze.
- Designed a visualization of the algorithm using Pygame.

Basic Calculator *Source Code - Website*
HTML, CSS, JAVASCRIPT *July 2023 - July 2023*

- Coded a basic calculator visualized through html and css.
- Implemented the shunting yard algorithm, which converts infix notation, taken from the front end user, to postfix notation.
- Programmed the calculation of a postfix notation received from the user using a stack.

Skills

Programming Languages	Python, C++, C, Javascript, GLSL
Web Experience	React, Django, Flask, JavaScript, Python, CSS, HTML, Beautiful Soup, Selenium
IT Experience	Powershell, Digital Imaging, Decommissioning, SQL, WSUS, Active Directory, Microsoft Endpoint Configuration Manager
Other Skills	Critical Thinking, Team Leadership, Project Planning, Regular Expressions, GIT, Documentation, Bash, Ubuntu, LaTeX, JSON, Pygame, OpenGL