

RYAN AXTELL

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SKILLS

- Languages: Python, JavaScript, C, HTML/CSS
- Technologies: React, Three.js, GTK4, Git, Vite
- Systems: Linux (Debian/Ubuntu), Server Administration, Bash
- Mathematics: Linear Algebra, Calculus, Statistics

PROJECTS - Live demos available at ryanaxtell.dev

Interactive Soft-Body Physics Simulation Oct 2024 – Nov 2024

PixiJS, Verlet Integration, Spring Constraints, Collision Handling

- A soft-body physics engine supporting many deformable objects with collisions and realistic friction. Expanded into a playable demo featuring a physics-driven vehicle, built upon principles from my fabric simulation project.

Interactive Cloth Simulation Sep 2024 – Nov Oct

PixiJS, Verlet Integration, Spring Constraints

- A cloth physics simulator using Verlet integration and spring constraints that lets users naturally manipulate, deform, and tear the fabric in real-time.

Pathfinding Algorithm Visualizer Jul 2024 – Aug 2024

Three.js, Priority Queues, A, BFS, DFS*

- A 3D visualization tool built with Three.js that demonstrates how different pathfinding and maze generation algorithms work. Users can create custom mazes, step through algorithms frame-by-frame, and watch search patterns unfold visually.

Cryptocurrency Wallet Searcher Mar 2023 – Sep 2023

Python, GTK4, Multiprocessing

- A Python-based scanning tool with GTK4 interface that rapidly searches drives for cryptocurrency wallet files. Built for a client to efficiently search many drives in parallel.

WORK EXPERIENCE

Freelance Programmer June 2020 – Present

- Developed automated price monitoring system using Python/Selenium/Square API to track vendor price changes against local inventory, reducing manual price checking time by 90%.
- Built high-performance GTK4-based file scanning tool in Python enabling parallel drive searching and pattern matching to find cryptocurrency wallets.
- Created complex Excel automation solutions with VBA, including data visualization dashboards and automated reporting systems.

IT Specialist / Computer Repair – PCI Computers Feb 2022 – Present

- Diagnose and repair hardware/software issues across Windows/Linux systems
- Provide remote IT support to businesses using NinjaRMM, resolving network, software, and system issues
- Build custom PCs, perform data recovery operations, and implement backup solutions for clients

IT Specialist / Web Developer – Holbrooks Clearance Center Aug 2020 – Present

- Developed Shopify e-commerce site with custom search filtering functionality beyond what's available in the theme by default.
- Built and maintained WooCommerce catalog site to showcase furniture inventory and product information.
- Provided comprehensive IT support including custom PC builds and system maintenance for office operations.

EDUCATION

Self-Taught Programming Education • SICP, NeetCode May 2020 – Present

- Studied Computer Science fundamentals through MIT's Structure and Interpretation of Computer Programs
- Mastered algorithms and data structures through university-level coursework and 100+ LeetCode problems

Community College Math Classes • Butte College, CA Jan 2020 – Jul 2023

- Completed advanced mathematics classes: Linear Algebra, Calculus I, Statistics