

Morgan Roadman

I write code to solve problems. I specialize in data analysis, simulation, and modeling, but my skills will be a valuable asset to any team's needs.

EXPERIENCE

Pace Analytical — Beaver, WV *Lab Technician*

August 2025 - Present

Perform oil and grease analysis to assess hexane-extractable material content and distinguish polar from non-polar fractions in environmental samples. Apply quality control practices, operate and maintain analytical equipment, record results and documentation through laboratory software.

Concord University Physics Department — Athens, WV *Radio Astronomy Assistant*

2024-2025 Academic Year

Developed a program to process real-time data from horn telescopes, documented my research process, and presented my findings. Assembled and utilized field research hardware and helped my physics mentor edit research notes.

Virginia Tech Center for Neutrino Physics — Blacksburg, VA *National Science Foundation (NSF) Research Experience for Undergraduates (REU)*

MAY 2024 - JULY 2024

NSF grant-funded research fellowship where I conducted and presented research on neutrino emissions from plutonium-241 in spent nuclear fuel. My findings contributed to my mentor's larger work on neutrinos, supported by grants from the U.S. Department of Energy and the National Nuclear Security Administration.

Concord University Music Department — Athens, WV *Student Assistant to the Band Director*

2022-2025 Academic Years

Sheetz — Weirton, WV

Store Team Member (Overnight) 2022-2024 Seasonal

EDUCATION

Concord University, Athens, WV

Bachelor of Science in Computer Science (Mathematics, Physics, and Music minors)

MAY 2025

- Cumulative GPA: 3.93 / 4.00 — Dean's List all semesters.
- Hopper-Turing Society Student Government Representative
- Sigma Sigma Sigma National Sorority
- Marching & Concert Band, Collegiate Singers, Conchords Acapella

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SKILLS

Programming/Tools

Python, Matplotlib, C, C++, Linux, HTML, CSS, SQL, R, Tableau

Data Analysis

Mathematical Problem Solving

Drawing/Graphic Design

Tenor Saxophone

CERTIFICATIONS

Google Data Analytics

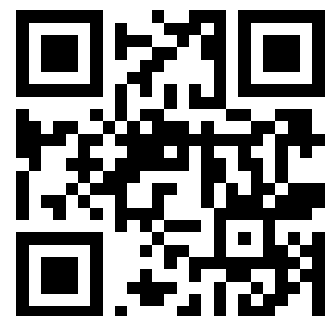
AWARDS & HONORS

Summa Cum Laude

Outstanding Computing Major Award (Class of 2025)

Outstanding Performance in the Program of Music (2025)

Scan the QR code below to see more of my work:



or visit morganroadman.com

Interferometry in Radio Astronomy — *Python, HTML, CSS*

Programming work for Radio Astronomy Assistant position. Developed a Python-based data pipeline to observe real-time frequency signal fringe patterns from horn telescopes. Read data from GNU Radio output, populated a dataframe, averaged signal over a given frequency range, graphed the average signal over time, and displayed in HTML visualization grid.

Portfolio Website: morganroadman.com — *HTML, CSS*

Individual HTML and CSS project to develop a portfolio website for public viewing. Utilizes domain name and web hosting services.

Conway's Game of Life — *Multi-threaded C++*

Individual C++ project from Parallel/Distributed Computing that introduces threading into Conway's Game of Life. Reads an initial state from a 5x5 grid input file, then continues showing iterations of cell life through user input.

Digital Dice Roller — *Digital Electronics*

Individual project from Digital Electronics that simulates rolling two standard six-sided dice using varying 555 timers and decade counters to light an LED display.

Random Walk Simulator — *Python (turtle)*

Partner coding project from Computational Physics that utilizes Python's turtle library to show the path of successive random steps in a one-dimensional or two-dimensional mathematical plane.

StudyWise — *Python (QT GUI)*

An application designed by students, for students, to aid them in their studying endeavors. Group coding project from Software Engineering that uses Python's QT library to develop an application to help biology students study using flashcards.

Virtual Machine 1 + 2 — *Python*

Individual Python Virtual Machine Translator, developed as part of the Nand2Tetris project in Computer Organization and Hardware. Translates high-level stack-based VM commands to corresponding assembly code.

Sorting — *C*

Individual C project from Computer Organization and Hardware that allows the user to interactively manipulate and search an integer array. Displays a menu of options, executes the chosen command, and shows the updated array.