August Herron

ryderherron@gmail.com | aherron1@trinity.edu | 512-717-1253 | Austin, TX

Purpose

Driven computer science and physics undergraduate looking to gain professional experience in the fields of math, physics, and computer science.

Education

Trinity University — San Antonio, TX
B.S. Computer Science, B.S. Applied Physics, Minor in Math — *August 2022 – Present*

Projects

Highpass/Lowpass Filter Audio Plugin | *C++, JUCE*
- Created a custom highpass and lowpass filter audio plugin that can be used in digital audio workstations, such as Ableton Live, for use in audio processing and music production.
- Built using the JUCE C++ audio plugin development framework.

Audio Processor App | *Swift, SwiftUI, Core Audio*
- Created an IOS app that allows you to record audio, process it with various effects (reverb, distortion, etc.), then play it back.
- Built using Apple's Core Audio API to allow for recording, playback and built in audio units.

Linear Regression ML Model | *Python, pandas, Seaborn, Matplotlib*
- Built a linear regression ML model from scratch to predict insurance cost using BMI and smoker status.
- Used the pandas Python library to read, sort, and manage data.
- Used the Seaborn and Matplotlib Python libraries to visualize results.

Dots and Boxes AI Solver | *Haskell*
- Created a brute force AI solver for the game Dots and Boxes.
- Can calculate the next best move for the user and play against the user with varying levels of depth.
- Created for a school project using the functional language Haskell.

Experience

Teaching Assistant — August 2024 – Present
Trinity University — *San Antonio, TX*
- Teaching assistant and tutor for Calculus III at Trinity's QRS center.

Lifeguard — June 2023 – August 2023
City of Austin — *Austin, TX*

Engineering Intern — June 2021 – July 2021
AECOM — *Austin, TX*
- Civil engineering internship about the Orange Line light rail system being designed in Austin.
- Learned about how large public transportation projects are proposed, designed and engineered.
- Used CAD software to design a light rail station with 3 other interns.
- Presented the proposed light rail station to the engineers and executives at AECOM and Capital Metro in Austin.

Skills

Programming languages: Java, C++, Python, Swift, HTML/CSS, JavaScript

Libraries/Frameworks: JUCE, pandas, NumPy, Seaborn, Matplotlib, Core Audio

Miscellaneous: Git, Linux, DSP, Latex, CAD, Digital Electronics, Mathematics and Physics, MS Excel/Word/Powerpoint

Relevant Coursework

Computer Science: Data Structures and Algorithms, Functional Programming, Competitive Programming

Mathematics: Linear Algebra, Differential Equations, Calculus I, II and, III, Discrete Math, Abstract Math

Other: Digital Electronics, Electricity & Magnetism, Mechanics, Modern Physics