

CHARLES N. DAIGLE (he/him/his)

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EDUCATION

Northeastern University, Boston, MA

May 2023

Candidate for BSEE in Electrical Engineering and Music; Concentration in Music Technology, Minor in Physics

GPA: 3.9/4.0

Achievements: Academic Scholarship, Deans List 2019

Related Coursework: Cornerstone of Eng. 1/2, Electronics, Fund. of Computer Science 1, Diff. Equations & Lin. Algebra, Modern Physics, Multivariate Calculus, Thermodynamics/Statistical Mechanics, Computer Music Fund.

PROJECT EXPERIENCE

Ben Eater 8-Bit Computer

May 2021 -- Present

- Build an 8-bit CPU kit with the goal of learning the concepts behind digital computing

The Wahz Wah

Dec 2019

- Built a guitar wah effects pedal and studied
- Modified an existing design and sourced missing parts through multiple suppliers

Highbeams

July 2018

- Co-wrote, co-performed, and co-mixed an original studio single using various analog/digital audio devices
- Used the Amuse digital music distributor to release the single on multiple streaming platforms

RELATED EXPERIENCE

MSI Transducers

Littleton, MA

Test Engineering/Test Software Automation Co-op

Jan 2021 – Present

- Collect electro-acoustic data of sonar transducers using instrument racks and various test softwares
- Design, repair, and troubleshoot hardware as needed to complete test plans
- Add features to test software written in LabVIEW with the goal of automating time-consuming testing
- Visualize and analyze data in presentations to design engineers

Analogic

Peabody, MA

Data Scientist/Engineering Tech Co-op

Jan 2020 – May 2020

- Collected X-ray image data of sample luggage with airport security scanner
- Regularly processed and filtered up to ~2 TB of data with Bash and Python scripts
- Wrote and analyzed machine learning classifiers to improve threat detection algorithms
- Presented weekly findings in person/remotely to a team of imaging physicists

Freelance Tutor

Boston, MA

Math and Computer Science Tutor

Nov 2018 – Present

- Prepare students for middle school math with a focus on enrichment
- Preemptively introduce students to basic theorems in algebra, geometry, number theory, and calculus
- Adapt to rapidly changing school curriculum to provide support in an interactive format
- Prepare a student for standardized and entrance exams, resulting in acceptance at Boston Latin School

SKILLS

Languages: Proficient in Python (Pandas, scikit-learn, various ML libraries), LabVIEW. Intermediate in C/C++, MATLAB. Familiar with HTML, CSS, JavaScript, Mathematica, Racket

Tools/Software: Proficient with Jupyter Notebook. Intermediate with Linux (Windows Subsystem for Linux), bash command line/scripting, AutoCAD, SolidWorks, Max/MSP

Hardware: Impedance/gain-phase analyzer, LCR meter, oscilloscope, switch matrix, function generator, analog circuit assembly (breadboard, soldering), analog filter, computer hardware assembly