Daniel Corcoran

(513) 850-9006 - Cincinnati, OH
corcordp@mail.uc.edu

EDUCATION

University of Cincinnati — *Cincinnati, Ohio*　　　　　*Graduated: May 2023*
Bachelor of Science, Computer Science　　　　　GPA: 3.5

SKILLS

**Engineering Project Management, Linux, Web Development, Cloud, Data Analysis, Embedded Systems
 C, CUDA, C++, C#, Python, R, Javascript**

EXPERIENCE

Givaudan Digitized Flavours, *Software Engineering Co-op*
01/2021 - Present
- Managed technical development of psychoanalysis tool leveraged to secure $800,000 deal with customer.
- Leveraged Aroma Synthesis hardware with Unity to create aroma-enabled virtual reality experience.
- Introduced Scrum, Git, AWS, Python, SQL within the department to streamline app development.

University of Cincinnati Solar Car Team - President
08/2021 - 04/2023
- Led a diverse team of 35 students across electrical, mechanical and operations departments.
- Fundraised $20,000 for the team by establishing two new corporate partnerships.
- Coordinated and produced the team's first Vehicle Design Review for feedback from race regulators.

Limbach Group Biological Mass Spectrometry, *Undergraduate Research*
 10/2019 - 12/2020
- Designed an algorithm and software package to automate the detection and characterization of RNA modifications via LC-MS/MS, significantly improving efficiency
- Achieved an 8x accelerated execution time by parallelizing algorithm on GPU with CUDA.
- Co-authored peer-reviewed paper in ACS Analytical Chemistry, contributing to the field of research.

CAGE, Cincinnati Children's Medical Center, *Machine Learning Co-op*
01/2020 - 05/2020
- Co-authored a peer-reviewed paper on protein ligand binding site prediction using machine learning.
- Utilized supercomputers to delegate model training, optimizing models written in R, Perl, and Python.
- Improved clustering package compute complexity from $O(n^2)$ to $O(n)$, achieving a ~10x speed increase.

PROJECTS

River Programming Language
- Invented a new programming language to learn about compilers and language design.

SeeOS
- Developed a custom operating system for self-designed cameras, with self-designed package manager and kernel.

NSA Codebreaker Challenge
- Ranked as a high performer in the 2022 NSA-sponsored hacking challenge.
- Utilized tools like GDB, Ghidra, SQL injections, and memory forensic to complete 8 out of 9 CTF challenges.

PUBLICATIONS

"CoeViz2: Protein Graphs Derived from Amino Acid Covariance", Frontiers in Bioinformatics, 2021

"Spectral networking of higher-energy collisional dissociation mass spectra facilitates characterization of known and unknown ribonucleoside modifications", ACS Analytical Chemistry, 2022

AWARDS & HONORS

Japanese Language Proficiency Test — Passed JLPT N3 Certification, studying for N2 in 2023
Dean's List — Since Summer 2019
Eagle Scout — *Dan Beard Council, Troop 21*