

Ethan Swaidner

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Education

Bachelor of Innovation in Computer Science
University of Colorado Colorado Springs

Expected December 2025
Colorado Springs, CO

Personal Statement

I've always had an innate drive to do things my own way. When I was 5 years old, I decided I wanted to open a lemonade stand. My parents directed me to come up with a bill of materials, expecting lemons, sugar, etcetera. The initial item on my list was wood, because in my mind, the first step was building a table - one that would be ideally suited for lemonade sales. I've changed a lot since then, but my unique approach to life has remained the same.

The projects I am most passionate about are those that redefine the status quo in pursuit of simplifying what was previously complex. I'm never afraid to take the harder path if I believe there is something to be gained. I've iterated on 3d modeling systems, game engines, and programming languages all in pursuit of creating simpler workflows. My assumptions are not always accurate and I've failed more times than I can recall, but I've learned from everything I've attempted.

Taking the road less traveled is rife with challenges. Sometimes, the best table for the lemonade stand is the one that already exists. Over time, I have gotten better at deciding when to reinvent and when to build upon pre-existing work. I expect that I will never stop striving to find a balance, but ultimately, I wouldn't have it any other way. The root of all innovation is the ability to reimagine what already exists.

Academic Experience

INOV 4500 Entrepreneurship and Strategy

INOV 4010 Innovation Team: Design and Lead

- Bahamas Feeding Network International (BFNI)
- Bernard Gay, President | (770) 862-8926
- Continued the work of a prior innovation team to develop a grassroots-focused online presence for BFNI, including a website supporting online donations, social media accounts, and an email template for donor outreach.

Academic Experience (continued)

CS 4420 Database Systems I

- Database design, normalization, and querying using SQL

CS 4220 Computer Networks

- History and overview of networking from the physical to the application layer

CS 4200 Computer Architecture I

- Modern computer hardware architecture with RISC-V assembly

CS 3160 Concepts of Programming Languages

- History and structure of programming languages
- Programming in LISP and ML

CS 3060 Object Oriented Programming with C++

- Gained experience and perspective writing software in C++

CS 3050 Social and Ethical Implications of Computing

- Discussed the societal and ethical impacts of software

CS 3020 Advanced Object Oriented Technology Using C#/.Net

- Rapidly iterated on projects and interfaced with 3rd party APIs

CS 2160 Computer Organization and Assembly Language

- Hardware architecture from transistors to simplified computers

CS 2150 Discrete Structures

- Boolean algebra, set theory, and mathematical proofs

INOV 3010 Innovation Team: Research and Execute

- AAA Medicaid Consulting LLC
- Jennifer Erickson, CEO | (719) 459-2519
- Developed a trifold pamphlet and slide deck intended to communicate the value of AAA Medicaid Consulting's services to potential investors using visually impactful graphics backed by reputable data sources.

CS 3080 Python Programming

- In-depth exploration of Python for software development

CS 2080 Programming with UNIX

- Bash programming, Make, Docker, and AWS

Academic Experience (continued)

CS 2060 Programming with C

- Introduction to the lower levels of computing

CS 2020 Intro to Statistics for Data Analytics

- Gained valuable context for communicating with data analysts

CS 1450 Data Structures and Algorithms

- Formal introduction to common data structures, terminology, and algorithms

INOV 2100 Technical Writing, Proposals, and Presentations

- Identified grant opportunities and wrote a complete grant proposal for HumanIT, a not-for-profit organization.

INOV 2010 Innovation Team: Analyze and Report

- University of Colorado President's Office
- Ashley Tillman
- ashley.tillman@cu.edu
- Discovered insights about the current state of the University of Colorado's Innovation program and provided recommendations for how it could be expanded.

GDD 2200 Object Oriented Analysis, Design, and Implementation

- C# game development in the Unity game engine

CS 2300 Computational Linear Algebra

- Matrix math with a focus on transformations

GDD 1200 Introduction to Programming for Game Development

- Principles of C# programming in Unity

BLAW 2010 Business and Intellectual Property Law

- Worked with a team to write a complete patent application
- Studied U.S. law with an emphasis on small businesses

INOV 1010 The Innovation Process

GDD 1100 Introduction to Game Development

ENTP 1000 Introduction to Entrepreneurship

Skills and Key Competencies

Programming Languages: JavaScript/TypeScript, HTML/CSS, Python, C#, Zig, C, Rust

- Web Application Development
- User Interface Development
- Software System Design
- Docker Containerization
- WebGL2 Real-Time Computer Graphics
- Project Management

Work Experience

SRAM

October 2024 - Present

Data Scientist Intern, Data and Analytics

- Leading development on a bicycle telemetry analysis web application designed to empower non-technical users to explore ride data self-sufficiently

SRAM

May 2024 - August 2024

Data Analyst Intern, Aftermarket Sales

- Developed a Python program to automate parsing and cleaning of heterogeneous sales data from third-party retailers, saving up to 5 hours of manual work per week and processing a 4-year backlog of over 1.5 million sales records

University of Colorado Colorado Springs

September 2023 - January 2025

Graphic Design Assistant, Auxiliary Marketing

- Managed an on-campus advertisement publication with over 500 copies distributed on a bi-weekly basis to an audience of 12,000 students, faculty, and staff