

# NICK SWISHER

SOFTWARE ENGINEER

GitHub: [swish0621](#)

- View my portfolio -

<https://swish0621.github.io/>



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LOCATION

Colorado Springs, Colorado



LINKED IN

Nicholas-Swisher0621

## TECHNICAL SKILLS

**LANGUAGES:** C++, Python, SQL

**FRAMEWORKS & LIBRARIES:**

FastAPI, scikit-learn, pandas, NumPy, Catch2

**DATABASES:** SQLite, MongoDB

**SOFTWARE ENGINEERING:** OOP

Design, Design Patterns, Algorithms, REST API Development, Unit Testing (TDD), CI/CD (GitHub Actions)

**DATA & ML:** NLP Techniques, Data Pipelines

**TOOLS:** Git/GitHub, VS Code, Command Line

## PROFILE

Computer Science student at the University of Colorado Boulder (3.8 GPA), graduating December 2025, with a prior BS in Kinesiology from the University of North Texas. I have experience developing backend software in C++, building data-processing and machine-learning pipelines in Python, and deploying API-driven services. My work includes designing modular system architectures, implementing performance-focused data structures, and creating applied ML solutions. I'm seeking an internship or full-time role where I can contribute by building reliable, scalable software systems.

## REFERENCES

Available on request.

## EDUCATION

2024 - 2025

**APPLIED COMPUTER SCIENCE**

University of Colorado, Boulder

BS Post-Baccalaureate

GPA: 3.8 | Expected Graduation: Dec., 2025

Data structures | Algorithms | Database

Design & Analysis | Software Development

Methods & Tools | Object-Oriented

Programming | Data Mining | Linear Algebra

2016 - 2020

**BS KINESIOLOGY**

University of North Texas, Denton, Texas

Minor Psychology

GPA: 3.622 | Graduated: May, 2020

Honors: Cum Laude, Dean's List,

President's List

## PROJECT EXPERIENCE

### Content Recommendation System – Solo Developer

Python • scikit-learn • SQLite • FastAPI

- Developed a content recommendation engine using TF-IDF vectorization and cosine similarity to generate real-time, similarity-based suggestions.
- Designed a reusable preprocessing and feature-extraction pipeline backed by a SQLite datastore for efficient metadata handling.
- Deployed the service on Render using FastAPI, exposing live recommendation endpoints suitable for integration into user-facing applications.

### Event Management Platform – Solo Developer

C++ • OOP

- Built a modular backend platform simulating an event-ticketing system with user accounts, event catalogs, and transaction flows.
- Applied OOP design patterns (Factory, Singleton) to support extensible event types and maintainable system growth.
- Implemented a centralized manager that loads structured event and user data from CSV files to coordinate system-wide operations.

### Data Structure Templating & Performance Benchmarking – Solo Developer

C++ • Catch2 • Algorithms

- Engineered templated data structures (HashMap, Binary Search Tree, Linear List) for performance-critical backend and systems applications.
- Built a Catch2 testing suite to validate correctness and edge-case handling across operations.
- Benchmarked runtime behavior across datasets to evaluate algorithmic tradeoffs and guide optimization decisions.

## WORK EXPERIENCE

**FRONT END MANAGER** Safeway

2024-2025

**ACCOUNT MANAGEMENT** Spectrum

2023-2024

**POWER SPORTS TECHNICIAN** Rocky Mountain Cycle Plaza

2021-2023