

# 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:** Feature Engineering, Data Pipelines

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

## PROFILE

Applied Computer Science graduate (GPA 3.74) from the University of Colorado Boulder, with a prior B.S. 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 such as a content-based recommendation system. I am seeking a full-time software engineering role where I can help build reliable, scalable software systems.

## REFERENCES

Available on request.

## EDUCATION

2024 - 2025

### APPLIED COMPUTER SCIENCE

*University of Colorado, Boulder, Colorado*

*B.S. Post-Baccalaureate*

*GPA: 3.74 | Graduated: December, 2025*

*Honors: Cum Laude*

2016 - 2020

### KINESIOLOGY

*University of North Texas, Denton, Texas*

*B.S. with Psychology Minor*

*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

- Diagnosed and repaired complex mechanical systems while communicating findings to customers.