

Marcos Arnold

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EDUCATION

Colorado College

Colorado Springs, CO

Bachelor of Arts, Double Major in Computer Science and Sociology

May 2027

- Relevant Coursework: Data Structures and Algorithms, Software Design, Number Theory, Racial Inequality

TECHNICAL SKILLS

Languages: Python (Advanced), Java (Advanced), SQL (Advanced), HTML (Advanced), C (Basic), JavaScript (Basic)

Libraries & Tools: Pandas, NumPy, Matplotlib, NetworkX, Vercel, Firebase, BeautifulSoup, Jupyter Notebook

Frameworks: Hugging Face Transformers, PyTorch, Django, HTMX, NetworkX, Swing

EXPERIENCE

Human-Computer Interaction (HCI) Research Assistant

November 2025 – Present

Colorado College Department of Computer Science

Colorado Springs, CO

- Collaborating with Dr. Varsha Koushik on qualitative, community-driven research examining how adults with cognitive disabilities and their caregivers interact with everyday technologies over time.
- Analyzing behavioral data to identify accessibility barriers and inform a potential co-design phase focused on developing inclusive, need-driven technological solutions.

Software Development Intern

May 2025 – October 2025

Colorado College Office of Information Technology

Colorado Springs, CO

- Developed a full-stack Django and HTMX application for IT staff and 20+ campus departments, centralizing 50+ institutional software and application records across divisions, service areas, and business functions to streamline cross-department coordination.
- Designed scalable database models and applying object-oriented principles to manage business processes and application usage analytics, delivering a reliable, maintainable system ready for production deployment.

TECH PROJECTS

Hue Hero | Java, Swing, SQL, JUnit, Image Processing

December 2025

- Building a desktop color-by-number game using MVC architecture with Swing UI, SQL database, and Factory pattern, designed to support multiple users with progress tracking and leaderboard functionality.

CashCow | React, TypeScript, Fetch.AI, FastAPI, BrightData MCP, Anthropic Claude

October 2025

- Engineered an AI-powered Chrome extension at Cal Hacks 12.0 that detects checkout pages, classifies merchants in real time using Fetch.AI and Anthropic Claude, and recommends the optimal credit card using real reward data from BrightData to maximize cashback and points.

Cultural Clusters in Music | Python, Pandas, Spotify, BeautifulSoup, caching

October 2025 – Present

- Applied the Louvain community detection algorithm to 1M+ Spotify artists and 5M+ collaboration links via Spotify, uncovering 50+ cultural and regional clusters in global music networks visualized with NetworkX and Leaflet.js

ADDITIONAL EXPERIENCES

Leadership Team

February 2025 – Present

Colorado College Coding Club

Colorado Springs, CO

- Mentoring 40+ students through 3+ monthly workshops and community events, helping members achieve personal, academic, and professional coding goals.
- Spearheaded Colorado College's first interdisciplinary hackathon with 20+ students from 8+ majors, designing event infrastructure and mentoring teams that developed 6 community revitalization solutions for Colorado Springs.

Webmaster Assistant

September 2025 – Present

The Sounds of Colorado College (SOCC) Radio

Colorado Springs, CO

- Managing and enhancing the SOCC Radio website using Cargo and WordPress, serving 500+ weekly visitors by streamlining content updates, integrating multimedia, and improving accessibility.