

# Marcos Arnold

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## EDUCATION

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### 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, Computer Organization, Number Theory

## TECHNICAL SKILLS

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**Programming Languages:** Python, Java, SQL, C, HTML, CSS

**Frameworks:** Django, React.js, Node.js, MongoDB, HTMX, Tailwind CSS, PyTorch

**Developer Tools:** Git, Visual Studio Code, Jupyter Notebook, ArcGIS, Postman, AWS, Firebase, Docker

## EXPERIENCE

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### Data Analysis and Research Assistant

January 2026 – Present

*Hey Neighbor*

*Colorado Springs, CO*

- Designing community research with executive leadership to evaluate Neighborhood University's impact on civic engagement, community building, and alumni leadership across 150+ alumni from 50+ neighborhoods.
- Analyzing, synthesizing, and visualizing qualitative focus group data and alumni geographic information using Excel, Stata, and ArcGIS, producing community maps and a master report that inform program structure, marketing strategy, and neighborhood expansion decisions

### Human-Computer Interaction (HCI) Research Assistant

November 2025 – Present

*Colorado College Department of Computer Science*

*Colorado Springs, CO*

- Conducting a comprehensive literature review under the guidance of Dr. Varsha Koushik on accessibility, cognitive disability, and long-term technology use to inform the design of a community-driven HCI research study.
- Synthesizing findings to inform the development of an adaptable computer vision-based tool for adults with neurodivergent needs, emphasizing inclusive design and software implementation considerations.

### Software Development Intern

May 2025 – October 2025

*Colorado College Office of Information Technology*

*Colorado Springs, CO*

- Developed a full-stack Django and HTMX application that centralized tracking for 23 institutional applications across 19 business processes, modeling a hierarchical service flow from division to department, service area, business function, and application to improve cross-department coordination.
- Designed and implemented a relational database schema in PostgreSQL supporting application states, ownership, and service routing, reducing duplicate records and improving data integrity.

## TECH PROJECTS

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

December 2025

- Built a desktop color-by-number pixel art game used by 20+ players, converting images into interactive grids and powering 50+ leaderboard entries with a MySQL database for persistent user accounts and saved progress.

**Twitter Community Detection** | *Python, NetworkX, Pandas, Leiden, Infomap*

May 2025

- Analyzed a Twitter network of 81,306 users from the Stanford SNAP dataset with Leiden and Infomap algorithms to measure information flow and quantify echo chamber effects, producing visualizations of community structures.

## ADDITIONAL EXPERIENCES

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### Webmaster Assistant

September 2025 – Present

*The Sounds of Colorado College (SOCC) Radio*

*Colorado Springs, CO*

- Developing and maintaining the SOCC Radio website using WordPress, Cargo, HTML, and CSS, supporting 500+ weekly visitors by implementing content updates, multimedia integrations, and accessibility improvements.

### Leadership Team

February 2025 – Present

*Colorado College Coding Club*

*Colorado Springs, CO*

- Mentoring 60+ students through workshops and community events, helping members achieve personal, academic, and professional coding goals.
- Founded Tiger HaCCs, the inaugural interdisciplinary campus hackathon, coordinating 40+ participants, securing sponsorships, and leading hands-on software development projects with Career Center and Math/CS Department.