# Marcos Arnold

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## **EDUCATION**

Colorado College, Colorado Springs, CO

May 2027

Bachelor of Arts, Double Major in Computer Science and Sociology

- Relevant Coursework: Data Structures and Algorithms; Applied Python; Number Theory; Racial Inequality
- Expected Coursework: Software Design; Computer Organization; Quantitative Research Methods

## PROFESSIONAL EXPERIENCE

Colorado College Office of Information Technology, Colorado Springs, CO

May 2025-Present

## Software Development Intern

- Collaborating with the Colorado College Office of Information Technology to build and deploy full-stack web applications using Django (Python) and HTMX.
- Applying object-oriented design, data structures, and algorithms to build production-level tools used by campus departments, gaining hands-on experience with real users and institutional needs.

Beats by Dre, Remote May 2025-Present

# Extern, Customer Insights & Data Analysis Externship

- Conducting data analysis and sentiment visualization using Gemini AI and Python to understand Gen Z audio preferences.
- Leveraging Python, data science libraries, and natural language processing tools like Gemini AI to perform sentiment analysis and visualize consumer feedback across multiple audio device brands.

#### **RELEVANT PROJECTS**

**Cultural Clusters in Music** 

June 2025-Present

• Exploring cultural evolution in music by applying the Louvain community detection algorithm to Spotify artist collaboration and genre data, and visualizing results in Python using NetworkX and Leaflet.js.

Snake Game AI May 2025

• Developed an AI-powered Snake game using Python and Pygame, implementing multiple pathfinding algorithms (Greedy, Dijkstra, A) to navigate dynamic environments with obstacles and optimize real-time decision-making.

## Redlining and Tree Canopy Inequity in the Windy City

March 2024

• Conducted a data-driven analysis in ArcGIS Pro on tree canopy inequity within 294 census tracts in Chicago using 5 years of American Community Survey (ACS) data, Home Owners' Loan Corporation (HOLC) neighborhood appraisal grades, and Google Environmental Insights Explorer (EIE) data.

## ADDITIONAL EXPERIENCES

Colorado College Coding Club, Colorado Springs, CO

#### Leadership Team

February 2025-Present

• Support 40+ students in achieving personal, academic, and professional coding goals through workshops and community engagement.

Club Member October 2023-Present

• Attend bi-weekly meeting workshops to develop coding skills, professional development, and network with industry professionals.

#### **TECHNICAL SKILLS**

Programming Languages: Python (Advanced), Java (Advanced), HTML (Advanced), and SQL (Basic)

Frameworks & Tools: Django, HTMX, TailwindCSS, Git, Hugging Face Transformers, PyTorch, and NetworkX