

Isaias Perez

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EDUCATION

University of Colorado Boulder

Bachelor of Science in Computer Science

Expected May 2027

Double Minor: Business and Applied Mathematics

Relevant Courses: Data Structures and Algorithms, Foundations of Object Oriented Programming, Computer Systems, Software Engineering Development Methods and Tools, Human Computer Interactions

TECHNICAL SKILLS

Languages: C/C++, Python, JavaScript, SQL, HTML/CSS

Frameworks: React, Node.js, Flask, FastAPI, Express.js, Bootstrap

Developer Tools: Git, Docker, Google Colab, Firebase, VS Code, Jupyter Notebooks

Libraries: TensorFlow, Pytorch, OpenCV, ONNX, pandas, NumPy, Scikit-learn, Matplotlib

Operating Systems: Windows, Linux, macOS

EXPERIENCE

Undergraduate Machine Learning Research Assistant

March 2025 – Present

University of Colorado Boulder

Boulder, CO

- Conducting research on Large Language Model (LLM) interpretability and evaluation under PhD student Amit Kiran Rege
- Designing structured tasks to assess model reasoning and decision-making processes
- Exploring methods to reduce AI hallucinations and improve explainability in LLMs
- Working with Hugging Face libraries and OpenAI models for NLP analysis

Software Engineer Intern

April 2023 – August 2023

Ryno Industries LLC

Erie, CO

- Increased System Scalability for Equipment Orders by **27%**
- Reduced Data Retrieval Latency for Equipment Specifications by **12.3%**
- Improved usability and enhanced content related to conveying equipment

PROJECTS

EcoVision | *Python, OpenCV, TensorFlow, Flask, ONNX, FastAPI, Firebase, Next.js*

Hackathon Project

- Developed a real-time item classification system utilizing machine learning, AMD Ryzen AI, and the YOLOv8 model to identify whether an item is recyclable, trash, or belongs to another category
- Optimized using ONNX quantization techniques for efficient deployment on AMD's Neural Processing Unit (NPU)

Machine Learning Fitness Tracker | *Python, Pandas, Matplotlib, NumPy, Scikit-learn*

Personal Project

- Created a fitness tracker using Python to process, visualize, and model accelerometer and gyroscope data
- Implemented classification of barbell exercises and repetition counting using machine learning techniques

BookHive | *HTML, CSS, JavaScript, Node.js, Express.js, PostgreSQL, Docker*

Group Project

- Developed a web-based book review application with a full-stack architecture
- Integrated a user-friendly frontend, a backend API, and a PostgreSQL database, containerized using Docker

LEADERSHIP EXPERIENCE

Society of Professional Hispanic Engineers (SHPE)

September 2023 – Present

Member

University of Colorado Boulder

- Enhanced group interactions and proposed new activities to foster engagement
- Promoted cultural diversity within the group

ADDITIONAL SKILLS

Natural Languages: Bilingual (Spanish-English), Spanish as first language

Soft Skills: Cross-cultural Communication, Problem Solving, Team Leadership