Conner Groth

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EDUCATION

University of Colorado Boulder — Boulder, CO
B.S. Computer Science, Minor in Business — *Expected: 2027*

- Relevant Coursework: Data Structures, Software Development, Computer Systems, Human Computer Interaction, Discrete Structures, Marketing & Management.

TECHNICAL SKILLS

Programming Languages: Python, C++, C, JavaScript, HTML, CSS, Assembly

Machine Learning & Data: TensorFlow, PyTorch, Pandas, SQL, PostgreSQL, Redis, NumPy, Matplotlib

Web & Backend Development: React, Next.js, FastAPI, Flask, REST APIs

DevOps & Tools: Docker, AWS, Git, GitHub, Bash, VSCode

EXPERIENCE

Frontend Web Developer — May 2023 - Aug 2023
Ryno Industries — *Erie, CO*

- Developed and optimized the company website to enhance usability, aesthetic appeal, and performance, resulting in a 20% increase in user engagement.
- Designed and implemented responsive layouts, ensuring seamless user experiences across devices, which improved mobile traffic retention and interaction.
- Leveraged technologies such as HTML, CSS, JavaScript, and React to meet project goals and deliver valuable results.

PROJECTS

EcoVision | *Next.js, React, Firebase, Tailwind CSS, TensorFlow, PyTorch, Python, FastAPI* — Mar 2025

- Developed an AI-powered recycling assistant that utilizes computer vision to identify recyclable items, providing users with proper disposal guidance and tracking their environmental impact.
- Engineered a YOLOv8 model optimized for AMD's Neural Processing Unit (NPU), reducing power consumption by 20% while maintaining real-time object detection.
- Leveraged TensorFlow and PyTorch for model training and inference, incorporating ChatGPT for enhanced item information.
- Conducted extensive model training and fine-tuning using datasets from Roboflow, achieving 90% detection accuracy for various recyclable materials.

AOTY API – Albumoftheyear.org Data API | *Python, FastAPI, PostgreSQL, Redis* — Feb - Mar 2025

- Developed a scalable API to scrape, structure, and provide Albumoftheyear.org music metadata & user ratings.
- Implemented FastAPI with asynchronous request handling to optimize data retrieval performance.
- Designed for seamless integration with Sonance and third-party applications for enhanced music analysis.

Strim - Running Activity Editor (Strava API) | *Python, Flask, HTML, CSS, JavaScript* — Jan - Feb 2025

- Developed a web app to process, edit, and reupload fitness data, solving inaccuracies in Strava activity tracking.
- Implemented file parsing & data manipulation algorithms, allowing precise timestamp and route adjustments.
- Integrated Strava API for user authentication and activity reuploading, streamlining the process.

Sonance – Music Recommendation Engine | *Python, FastAPI, PostgreSQL, Redis* — Jan 2025 - Current

- Developing a machine learning-powered recommendation system integrating Spotify, Last.fm, and Albumoftheyear data to generate accurate and personalized recommendations.
- Optimizing data retrieval and model performance using Docker and PostgreSQL.
- Managing large datasets efficiently with SQL and Redis caching.