Jaron Rothbaum

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EDUCATION

University of Colorado Boulder | Boulder, CO **Expected: May 2026**
Bachelor's in Computer Science, Minor in Creative Technology & Design Cumulative GPA 3.9/4.0

- **Relevant Coursework:** Data Structures, Programming Languages, Computer Systems, Probability and Statistics, Linear Algebra, Software Development, Machine Learning, Databases, OOP Design Patterns
- **Academic Honors & Awards:** Dean's list 2022-2024; 34/36 ACT; AP Scholar
- **Activities and Societies:** CU Game Dev and Graphics Club, ZBT Fraternity

EXPERIENCE

OrbiMed | *Software Analyst Intern* | New York, NY **June 2025 - August 2025**

- Built a multi-agent LLM pipeline that scrapes the web, parses HTML, and cross-verifies contact data, drastically reducing private-equity prospecting effort.
- Engineered a modular Python library and lightweight API that scores equites by style factors, re-weights baskets accordingly, and serves fast endpoints for further analysis.
- Built and deployed a Python Selenium script that automated end-to-end data extraction and filtering, reducing manual effort and ensuring consistent, reproducible data pulls for quantitative analysis.

Kartos Therapeutics | *Business Development & Biometrics Intern* | Palo Alto, CA **June 2023 - August 2023**

- Reviewed and updated hundreds of patient data files comparing critical health indicators in order to monitor patient recovery process for Myelofibrosis on Navtemadlin.
- Worked with Business Development team to verify claims from pharmaceutical alternatives, by analyzing and exposing faulty data and monitoring progress.
- Assisted Biometrics team on maintaining database functionality and flagging suspicious data.

PROJECTS

Baseball Swing Analysis App **February 2024 - May 2025**

- Built an end-to-end swing analysis pipeline using YOLOv8 pose estimation to extract 2D keypoints and swing metrics (e.g. peak wrist speed, hip rotation) from user-uploaded baseball videos.
- Applied machine learning and signal processing techniques to extract key motion metrics like speed, angles, and timing from the video.
- Engineered a FastAPI backend with Firebase Storage and OpenAI integration to deliver instant swing feedback and personalized coaching tips.
- Deployed the full pipeline to Google Cloud Run, allowing scalable serverless execution of pose extraction and metric analysis from mobile-captured videos.
- Focused on accessibility and youth coaching by translating complex motion data into actionable, user-friendly feedback.

Full Stack Chat Web App Group Project **October 2024 - December 2024**

- Collaborated with a team to develop a web application that streamlined peer-to-peer communication for CU students.
- Implemented user authentication and class enrollment features using Node.js, PostgreSQL, and HTML/CSS with Bootstrap.
- Developed a real-time chat system using WebSockets for live communication between classmates.

Restaurant Review Database **April 2024 - May 2024**

- Created and maintained a data structure for efficient storing, retrieving, and manipulating of restaurant reviews in C++.
- Utilized a hash table with chaining for collision resolution with a Linked List as the backing data structure.
- Implemented a max-heap queue in to store the restaurant reviews around the area of Boulder, CO, with priority for the most recent reviews, ensuring O(log m) time complexity for insertions and deletions.
- Optimized data retrieval by combining the hashmap and max-heap, enabling efficient management of a dynamic set of reviews in a menu-driven function to allow users to print, add, and remove reviews as well as collisions.

Neural Network Chatbot **August 2024 - Present**

- Built a basic retrieval chat bot in Python capable of providing personalized video game recommendations across multiple categories, including multiplayer games, single-player games, co-op games, strategy games, RPGs, and sports games.
- Implemented intent recognition using a neural network built with Keras, enabling the chat bot to accurately classify user inputs and provide contextually appropriate suggestions.
- Leveraged natural language processing (NLP) techniques using NLTK to preprocess and analyze user queries, improving the bot's ability to understand and respond to diverse inputs.
- Employed a Stochastic Gradient Descent with nesterov momentum for model optimization, enhancing the bot's learning efficiency and accuracy

SKILLS

- **Programming Languages:** C++, Python, Java, Scala, C, JavaScript, Assembly, LaTeX.
- **Libraries & Frameworks:** `TensorFlow`, `NumPy`, `pandas`, `Keras`, `NLTK`, Node.js
- **Technologies:** VSCode, JupyterNotebook, PyCharm, IntelliJ, SQL, Git