KADEN RITZER

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SUMMARY

Motivated Computer engineering student at CU Boulder with hands-on internship experience in software development and a specialized focus on ML and agentic systems. Skilled in Python, C#, and SQL; currently engineering local-first AI architectures.

EDUCATION

University of Colorado Boulder – B.S. in Electrical & Computer Engineering

Expected Graduation: May 2029

Boulder High School – High School Diploma, 2025

Honors: Business Student of the Year 2024; 4x Academic Honors.

TECHNICAL PROJECTS

BasecampAgent: Local-First Agentic AI System | Independent | 2025

• Architected a two-tier, hybrid agent system using Python 3.12 and llama.cpp to maximize on-device performance across disparate hardware architectures.

•Developed a "No-Framework" agency model to bypass traditional abstractions (LangChain), successfully minimizing TTFT latency and ensuring hardware transparency.

• Engineered a hardened toolset featuring parallel web scraping, SQLite3-backed persistent memory, and direct Ubuntu Bash integration for local workspace management.

Custom PCB Design for GPS/Radio Dog Collar | Freshman Design Class | 2025

• Designed a custom PCB in KiCad integrating a XIAO RA4M1 microcontroller, RFM9x LoRa module, and Adafruit GPS into a compact wearable form factor.

• Managing schematic-to-layout workflow with a focus on signal integrity, power delivery, and custom component footprint creation.

Neural Network Deployment on Embedded Hardware | Independent | 2025

• Trained a competent wake-word detecting neural network fully from scratch using Python/Tensorflow in Google Collab.

• Deployed the network on local embedded hardware for usage in a real-world system.

PROFESSIONAL EXPERIENCE

Bolder Interactive – Development Intern | Boulder, CO | May 2024 – Aug 2024

• Developed gameplay features in C# using Unity, gaining exposure to game engine architecture and asset integration pipelines.

• Assisted with QA testing and iteration to improve runtime stability.

Nigh, Inc. – Technical Intern | Boulder, CO | May 2025 – Aug 2025

• Wrote Python and SQL scripts to qualify and analyze data for app development within an agile startup environment.

• Supported feature testing and product validation, applying full-stack fundamentals to collaborative projects.

SKILLS

• Programming: Python, C#, C++, SQL, Verilog, Bash

• AI & Inference: llama.cpp, local LLM orchestration, Agentic Workflows, SQLite3, Flask

• Hardware & Tools: KiCad, Vivado, Linux/Ubuntu, Git

• Soft Skills: Systems Thinking, Problem-Solving, Collaboration

LEADERSHIP & ACTIVITIES

Cybersecurity Club — Co-Founder & Vice President | Aug 2023 – May 2024

• Organized and led club meetings, competitions, and workshops focused on cybersecurity and social engineering awareness.

DECA — Chapter Officer & Nationals Competitor | Aug 2023 – Apr 2024

• Represented chapter at state and national levels, developing decision-making and presentation skills under competitive pressure.