

Brock Benton

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EDUCATION

University of Colorado Boulder	Boulder, CO
<i>B.A. in Computer Science, B.A. in Economics (GPA: 3.97)</i>	<i>Expected May 2028</i>
• <i>Honors:</i> Boettcher Scholar, Undergraduate Enrichment Program, Engineering Honors Program	
• <i>Clubs:</i> Blockchain Club (Co-President), CS Undergraduate Advising Committee (Head of Academics)	
• <i>Relevant Coursework:</i> Algorithms, Data Structures, Software Development, Algorithmic Economics, Microeconomics, Macroeconomics	

WORK EXPERIENCE

Information Technology Manager, Computer System Administrator	May 2023 – Aug. 2025
<i>Alamosa School District</i>	<i>Alamosa, CO</i>
• Led IT support operations for 3000+ devices across a district serving 2100+ students and 440+ staff	
• Oversaw and coordinated a summer tech team, facilitating task delegation, daily standups, and team workflows	
• Streamlined laptop imaging processes using FOG Project and FlexOS to deploy standardized system clones efficiently	
• Performed hardware repairs on Chromebooks and Windows laptops, including keyboards, touchpads, and screens	
• Tracked and managed district-wide device inventory using Incident IQ	
• Assisted with infrastructure maintenance, including Ethernet cable routing and workstation setups	

PROJECTS

Base Bets: Onchain Esrow (MBC Hackathon) <i>TypeScript, Node.js, Smart Contracts</i>	Dec. 2025
• Architected and deployed smart contract system with account abstraction to enable gasless transactions, reducing user transaction costs to sub-cent levels while maintaining security	
• Integrated external REST APIs to create hybrid oracle system for real-world event resolution, automating financial settlement based on prediction market outcomes	
• Designed incentive-compatible escrow mechanism leveraging external data sources as trustless arbiters, eliminating counterparty risk in peer-to-peer financial agreements	
• Implemented secure financial transaction handling with cryptographic signature verification and automated settlement logic	
Distributed Consensus System <i>C++, TCP Sockets, Multi-threading, Cryptography</i>	Nov. 2025
• Built distributed peer-to-peer network in C++ featuring cryptographic proof-of-work validation, transaction processing, and consensus algorithms for data integrity across multiple nodes	
• Implemented multi-threaded TCP server handling concurrent client connections with mutex-protected shared state and JSON-based inter-process communication protocol	
• Designed automatic chain synchronization algorithm enabling nodes to resolve conflicts and maintain consistency through cryptographic validation and longest-chain selection	
• Applied SHA-256 hashing and Merkle tree data structures to ensure tamper-proof transaction validation in distributed environment	
Git Infrastructure & CI/CD Pipeline <i>Docker, Nginx, PostgreSQL, Python, Linux</i>	Oct. 2025
• Engineered containerized Git infrastructure using Docker Compose to orchestrate multi-service architecture with automated database backups and persistent volume management	
• Configured Nginx reverse proxy with SSL/TLS termination to provide secure HTTPS access and unified routing across microservices	
• Developed automated CI/CD pipeline with webhook-driven deployments, implementing HMAC-SHA256 signature verification for secure event-driven automation	
• Built Python automation scripts for deployment workflows, reducing manual deployment time by 90% and enabling continuous integration for development teams	

TECHNICAL SKILLS

Languages: C++, Python, TypeScript, JavaScript, SQL, Bash

Backend & Infrastructure: Node.js, Docker, PostgreSQL, Nginx, REST APIs, CI/CD, Linux, TCP Sockets

Systems & Distributed Computing: Multi-threading, P2P Networking, Consensus Algorithms, Cryptography

Blockchain Technologies: Solidity, Ethereum, Smart Contracts, Hardhat, ethers.js, ERC-4337