

# Caleb Bettcher

calebbettcher@gmail.com

[calebbettcher.com](http://calebbettcher.com)

Boulder, CO

## EDUCATION

### University of Colorado Boulder

Master of Science in Artificial Intelligence (Concurrent Program)  
Bachelor of Science in Computer Science, Minor in Business

Boulder, CO

**Aug 2025 - May 2027**  
**Aug 2023 - May 2026**

**Cumulative GPA** - 3.92, Dean's List

**CU Quants** - Trader

**CU Triathlon Team, CU Freeride** - Member

## WORK EXPERIENCE

### Belvedere Trading (Incoming Role)

**Summer 2026**

Quantitative Software Engineering Intern

Boulder, CO

- Develop low-latency algorithms for making real time decisions in electronic trading systems
- Apply quantitative and statistical methods to identify market inefficiencies
- Interface with market data pipelines and APIs in performance-critical environments

### University of Colorado Boulder - College of Engineering & Applied Science

**Aug 2024 – May 2025**

Machine Learning Research Assistant

Boulder, CO

- Developed software to generate datasets from multi-dimensional satellite data spanning over 6 years
- Trained and evaluated custom YOLO object-detection models in PyTorch to identify particle-precipitation event signatures in optimized plots of satellite data
- Investigated false positives/negatives and refined dataset labeling to improve model performance
- Leveraged university research HPC clusters for scalable model training and resource management
- Presented on the application and optimization of ML/AI to astrophysics at a national research conference

### Net-Results Marketing Automation

**May – Aug 2022 & 2023**

Full Stack Web Development Intern

Denver, CO

- Built React frontend and GraphQL backend features enabling customizable automated marketing workflows and CRM integrations for 20,000+ active users
- Collaborated with developers to design, build, and implement user-customizable, automated marketing actions
- Partnered with customer success team to handle inquiries and solve user issues

### Handshake AI Solutions

**Aug 2025 - Present**

Prompt Engineer / AI Research Fellow

Remote

- Design and implement structured, complex prompts in niche academic fields such as SAT/SMT solvers and advanced algorithmic reasoning to evaluate and fine-tune Large Language Models
- Analyze and resolve internal model reasoning failures to improve reliability and interpretability of AI systems

### YouTube

**Apr 2020 – Present**

Content Creator

Remote

- Built a YouTube channel with over 80,000 subscribers and 10 Million views across 150 videos
- Hired, and worked closely with an editor to streamline production process and sustainably increase output
- Partnered with Supercell and other companies to generate revenue through sponsorships

## SKILLS & EXPERTISE

- **Languages** - Python, JavaScript, Julia, C++, Java, SQL
- **Frameworks/Libraries** - PyTorch, YOLO, React, Laravel, GraphQL
- **Technical Skills** - Git, HPC Clusters, Machine Learning, Computer Vision, Data Analysis, Financial Analysis
- **Professional Skills** - Critical Thinking, Project Management, Leadership, Communication, Technical Writing
- **Certifications:** TestOut - Network Pro, TestOut - Linux Pro, Handshake - Model Validation 2 (Expert)