Aiden Ankrum

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Education

Columbia University in the City of New York — New York, NY
B.S. in Computer Science; Minors: Mechanical Engineering, History — *Aug. 2023 – May 2026*
- GPA: 3.6 — Dean's List

Kealekehe High School — Kailua-Kona, HI
High School Diploma — Valedictorian — *Aug. 2019 – May 2023*
- GPA: 4.3 — Graduated with Honors

Experience

Columbia Space Initiative — Sep. 2023 – Present
CubeSat Structural Lead — *New York, NY*
- Led structural and thermal analysis for an upcoming CubeSat launch (Spring 2026) using SolidWorks and physics-based modeling.
- Designed a modular payload deployment mechanism, enhancing versatility and reducing payload mass.
- Coordinated orbital assessment documentation and regulatory compliance for satellite launch.

Columbia AI Alignment Club — Jan. 2024 – Present
Member — *New York, NY*
- Contributed to theoretical alignment discussions.
- Participated in the Alignment Research Engineering Accelerator Summer Program in 2025.

Matriculate — Jan. 2024 – Aug. 2025
College Advisor — *New York, NY*
- Mentored high-achieving, low-income students through college admissions; supported essay development and interview prep.
- Improved students' application outcomes through tailored strategy, writing feedback, and resume coaching.

FRC Robotics — Aug. 2020 – Present
Team 3880 and Team 9295 — Captain, Mentor — *Hawaii / New York*
- Led 20-member robotics team to state-level finals; managed full development cycle of competitive robotic systems.
- Currently mentoring high school team on CAD design, programming, and control systems using industry-grade tools.

Highlighted Projects

Real-Time Algorithmic Crypto Trading Platform | *Python, PyTorch, SQL, Flask* — May 2025 – Aug. 2025
- Developed automated trading system executing trades every 3 minutes using predictive ML models.
- Designed SQL pipeline to store live market data; trained PyTorch models to forecast short-term price movement.
- Built Flask-based frontend and REST API for trade visualization, strategy configuration, and model deployment.

Coral Health Classification System | *Python, TensorFlow, MATLAB* — June 2022 – June 2023
- Built image classification pipeline to detect coral bleaching in 10,000+ annotated images.
- Achieved above 80% accuracy in distinguishing coral species; presented at ISEF and received NOAA Award.

Technical Skills

Languages: Python, Java, C, MIPS Assembly, HTML/CSS
Frameworks & Tools: Flask, PyTorch, TensorFlow, Git, Docker, SQL, SolidWorks, VS Code, IntelliJ, PyCharm
Core Areas: Software Engineering, Full Stack Development, Machine Learning, Systems Programming, CAD Design

Certifications

Certified Manufacturing Associate: SME
Additive Manufacturing Certification: SME
OSHA 10-Hour Construction Safety: OSHA