

Baiza Mand

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Education

Colorado School of Mines, Golden, CO

Double Major: **Engineering Physics & Computer Science**

Expected B.S. May 2026

GPA Pending (**Currently 4.0**)

Cañon City High School, Cañon City, CO

Engineering, Technology, and Math

Diploma May 2022

Weighted GPA: 4.55 (Unweighted 4.0)

Relevant Experience:

Rocket Sled Track Alignment Study (**Sandia National Laboratories**)

- **Studied and modeled** the current state of the sled track's alignment.
- **Brainstormed** possible solutions and challenges around the problem.
- **Developed python algorithms** to determine the **most optimal** track alignment possible.
- **Generated** numerous **realistic** methods for correcting the track's alignment.
- **Devised** the most **efficient** solution by **combining multiple ideas**.

Systems Go: **Rocket Design I and II Course** (Cañon City High School)

- **Headed** my team in the process of creating **high-powered rockets to meet specified objectives**.
- **Researched** best materials available to optimize rocket **performance vs cost**.
- **Performed** all the necessary calculations by hand to prove our design could be successful.
- **Presented** our design to a panel of professional engineers and NASA scientists and **gathered feedback**.
- **Programmed** rocket simulation software in Excel using modern, reliable aerospace equations.

Design I Course: Solar-Powered Water Heater

- **Collaborated** with a team and numerous professionals in the field.
- **Narrowed** down problem statement and presented a variety of possible solutions.
- **Prototyped** our design on a 1:5 scale for demonstration.
- **Engaged** with stakeholders to validate and revise our design.
- **Crafted** a 90-page **technical report** including **SolidWorks technical drawings**.

Employment

Sandia National Laboratories – Summer Intern: Energetic Environments

May 2023 –

- **Studying** engineering challenges to come up with **creative solutions**.
- **Designing** and **analyzing** parts to withstand thousands of pounds of force.
- Sorting historical studies into a **database**.

August 2023

Colorado School of Mines Physics Department – Physics 2 Teacher's Assistant

August 2023 –

- **Tutoring** and helping students understand and apply physics.
- **Preparing** the physics studio for labs.

Current

Colorado School of Mines Foundation – Call Center Digger-Dialer

September 2022 –

- **Contacting** alumni and gathering feedback on their experiences.
- **Networking** with potential employers and colleagues.

Current

Domino's – Insider

November 2021 –

- Taking customer orders and being a **respectful and helpful representative**.
- Preparing food and keeping the work area clean and sanitary

August 2022

Skills and Strengths

Computer: Python, C++, Java, LaTeX, RISC-V; Microsoft Excel, Word, PowerPoint; SolidWorks

Laboratory: Safety, chemical preparation, titrations, documentations

Communication: Technical writing, presentations

Other: Organized, passionate, problem-solver, strong team and leadership skills

Citizenship: U.S. Citizen

Certifications

SolidWorks Associate Certification
Microsoft Office Specialist in **Word and Excel**

Achievements

- **Daniels Scholar**
- High School Class **Rank 1 of 191**
- **SAT Scored 1530** (800 Math, 730 English)
- 5 on AP Chemistry, Calculus AB, Computer Science A, CS Principles, and Physics 1: Algebra-Based
- 4.55 Weighted GPA at Cañon City High School

Activities

- Society of Physics Students
- Association for Computing Machinery (ACM)
- Engineering Grand Challenges Learning Community
- Robotics Club
- Rocketry Club