GRAHAM LUNZER

Mechanical Engineering Applicant | Founder, Lunzer Engineering

Varsity Quarterback | Robotics CAD/Build Lead | lunzerengineering.com

ACADEMICS

Valley Christian High School
Cerritos, CA
Class of 2027

GPA: 4.6 weighted

SAT Superscore: 1450
(710 English, 740 Math)

Intended Major:
Mechanical Engineering

COURSEWORK

AP Calculus BC; AP Physics C; AP Literature; AP Language; AP Statistics; AP Government; Economics; Psychology; 3D Printing

HONORS

National Honor Society

National Merit eligible

Dean's List / Principal's List

Academic Honor Athlete

TECHNICAL SKILLS

CAD/Design: SolidWorks, Onshape, Fusion 360, generative design research, stress/force analysis

Fabrication: FDM/resin 3D printing, 3D scanning, machining, heat-set inserts, prototyping

Electronics: Arduino, MOSFET switching, sensors, soldering, power systems, LCD integration

Materials: PLA, PETG, TPU, carbon-fiber nylon, resin, magnet wire

LEADERSHIP

Founder, Lunzer Engineering

Varsity Quarterback

Robotics CAD/Build Team Leader

QB Select Volunteer Coach

Black Belt in Taekwondo

WEBSITE

lunzerengineering.com

PROFILE

Mechanical engineering-focused student, founder of Lunzer Engineering, varsity quarterback, and robotics CAD/build leader with hands-on experience in CAD, 3D printing, electronics, mechanical systems, and product prototyping. Combines technical design work with leadership in athletics, robotics, and community service.

EDUCATION

Valley Christian High School - Cerritos, CA | Class of 2027

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Senior Coursework: AP Calculus BC, AP Physics C, AP Literature, 3D Printing, Government, Economics, Guitar, Psychology.

ENGINEERING, ENTREPRENEURSHIP & RESEARCH

Founder - Lunzer Engineering

- Founded an engineering business and portfolio focused on commissioned CAD models, prototypes, mechanical systems, and original project documentation.
- Designed and manufactured custom parts using SolidWorks, 3D printing, 3D scanning, simulation, and mechanical testing.
- Developed brand identity, website, project documentation, and sponsor outreach; secured support from Bioenno Power and MWS Wire.
- Built projects involving electromagnetic acceleration, mechanical power transmission, functional 3D-printed products, and reverse-engineered parts.

Electromagnetic Accelerator Project

- Designed and built a six-coil electromagnetic accelerator using magnet wire, MOSFET switching, break-beam sensors, and Arduino-based speed measurement.
- Integrated power electronics, coil timing, sensor feedback, LCD speed output, and mechanical design into a working prototype.
- Achieved a recorded projectile speed of 143 mph while applying electromagnetism, circuit design, CAD, prototyping, and iterative testing.

Project Mobility - Electric Knee Scooter

- Designed an electric mobility scooter after a leg injury using a 24V battery, motor drive system, Bluetooth joystick control, and custom gearbox.
- Engineered a multi-stage gear reduction system to balance speed, torque, and rider safety in a functional mobility solution.

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ROBOTICS & TECHNICAL EXPERIENCE

FRC Robotics - Team 4415 | CAD & Build Team Leader

- Designed and fabricated robot components using CAD, force/stress analysis, machining, and design review under strict competition timelines.
- Helped lead build strategy for Team 4415; contributed to 2025 2x regional championships, 2025 state championship, 2025 World Championship qualification, and 2026 Regional Finalist finish.
- Collaborated with teammates on prototyping, manufacturing, assembly, testing, and competition-ready mechanical systems.

REPS VR Internship - Design & Prototyping

- Designed and prototyped VR training hardware, including a 360 helmet mount developed through iterative design to interface with a Riddell SpeedFlex helmet.
- Applied CAD, prototyping, and real-world product design skills in a professional development environment.

3D Printing / Product Design

- Designed and printed functional parts using PLA, PETG, TPU, carbon-fiber nylon, and resin across multiple FDM and resin printers.
- Used 3D scanning to reverse-engineer and redesign parts for vehicles, tools, product concepts, and custom mechanical applications.
- Created projects including RailLight mounts, a dry-air jewelry box, wall mounts, marine/yacht model components, motorcycle parts, and vehicle accessories.

ATHLETICS & LEADERSHIP

Starting Varsity Quarterback - Valley Christian High School

- Starting varsity quarterback responsible for team communication, discipline, composure, and leadership under pressure.
- 2025 CIF Division 9 Champion; 2025 All Area Player; 2025 Area Offensive Player of the Year; 2025 Press Telegram Dream Team; 2025 All League; Academic Honor Athlete.
- Played quarterback for 15 years and served as a captain across youth and high school football.

QB Select - Volunteer Quarterback Coach

- Coached younger quarterbacks through throwing sessions, drills, mechanics, game preparation, and leadership development.

SERVICE & ADDITIONAL INTERESTS

Independent Community Volunteering

- Assisted elderly neighbors with small projects and home tasks, helping them maintain their homes and independence.

Hope Chapel "Hopechella" School Dance Volunteer

- Supported a school dance for children with special needs by helping with setup, navigation, and event support.

Vintage Dirt Bike Restoration

- Restores vintage dirt bikes through mechanical repair, fabrication, electrical work, engine maintenance, and carburetor tuning.

Independent Engineering Research

- Researched how AI and generative design are influencing engineering workflows and the future of technical careers.