TYLER HOLMAN

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EDUCATION

Harvey Mudd College, Claremont, California — Expected May 2029
B.S., Engineering - GPA: 3.67, VEX Robotics Scholarship
Emphasis: Robotics

RELEVANT COURSEWORK

Engineering Systems with Lab - Applying systems engineering principles to model, design, construct, and control mechanical, thermal, and electrical systems alongside hands-on experimentation and analysis with an underwater robot
Chemical and Thermal Processes - Using the laws of thermodynamics to analyze energy conversion, heat transfer, and work in reactive and non-reactive engineering systems
Intro to Engineering Design and Manufacturing - Learning the engineering design process to solve open-ended problems through CAD, hands-on fabrication, prototyping, and iterative testing
Spring '27 coursework: Electrical and Magnetic Circuits, Digital Electronics and Computer Engineering

SKILLS

- **Technical:** SolidWorks, Fusion 360, soldering, 3D printing, FPV drone piloting, GitHub, fabrication, design for manufacturing
- **Programming Languages:** Python, Java
- **Languages:** English (Native), Spanish (Proficient)
- **Certifications:** FAA Part 107 Certified UAS Pilot, Machine Shop Certification

RESEARCH EXPERIENCE

Research, Harvey Mudd College, Claremont, California — January 2026 - Present

- Conducting research at the Laboratory for Imaginative Prototyping with AI (IPAI) at Harvey Mudd, rapidly prototyping AI systems and software, and evaluating technical design with ethical and societal analysis
- Building Classroot, a full-stack RAG application enabling users to trace any problem or topic to the exact material used to teach it
- Prototyped LLM-powered applications - a natural-language Solidworks CAD tool, an accessible AI tutoring platform, and new features for Claremont Colleges' scheduling system: Hyperschedule

Internship, University of Colorado Boulder, Boulder, CO — June 2024 - August 2024

- Researched conductive 3D printing filament with a CU professor and graduate student
- Executed hardware testing on conductive-filament specimens measuring resistance under strain and documenting results

PROJECTS

Member, Mudd Advanced Rocketry Club, Claremont, CA — August 2025 - Present

- Explored computer aided design and manufacturing to produce an accurate process to cut fin slots on airframe
- Developing mechanical systems for active guidance - canards and rear-fin flaps

Drone Engineering, FPV Drone Building and Flying, Lafayette, CO — June 2022 - Present

- Build, solder, repair, and flight test FPV drones by configuring UAS flight controllers, optimizing PID tuning for reliable flight

WORK EXPERIENCE

Summer Day Camp Lead, City of Lafayette, Lafayette, CO — May 2023 - August 2026

- Collaborated with a team to engage 20-30 children at camp, delivering enrichment while ensuring a safe environment

LEADERSHIP EXPERIENCE

Founder, VEX Robotics Team, Lafayette, CO — November 2020 - May 2025

- Co-founded Peak to Peak's World Championship qualifying High School Robotics team
- Led the design and development of key robot mechanisms, applying iterative prototyping and testing to solve mechanical challenges
- Organized and managed the team's engineering workflow, documenting progress, and guiding collaboration across mechanical, electrical, and software development

Founder, High School 3D Printing Program, Lafayette, CO — October 2024 - May 2025

- Established a school-based 3D printing program, designing and fabricating custom educational materials through a teacher-request system, including VSEPR molecular models and classroom escape-room components

Club Leadership, National Honor Society, LINK Program, Lafayette, CO — June 2024 - May 2025

- Co-led high school's LINK program and chapter of NHS, organizing events, teaching lessons, and leading volunteer initiatives