Kalen Cole Jaroszewski

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EDUCATION

Texas A&M – College Station, TX **Mechanical Engineering - BS** **GPA** - 3.622 Graduation 2027

EXPERIENCES

TAMU IGNITORS Rocketry Team - Avionics/Ground Support Member | Team of 11 November 2024 - Present

- Integrating avionic systems for a hybrid rocket competing in the International Rocket Engineering Competition

TAMU TURTLE Robotics - Student Development Head (Officer)| Team of 8 May 2024 - Present

TAMU TURTLE Robotics - Member January 2024 - Present

- Reformed and taught a self-sustaining semester-long introductory program developing 105 members in CAD, electronics, and embedded programming proficiency, while tripling the retention rate to 77% from previous years
- Reduced introductory program spending, while maintaining full functionality within a $1,400 budget constraint
- Successfully pitched three organization initiatives including expanding manufacturing capabilities, restructuring introductory program, and formal internal processes
- Managed 6 members in the design process of a 10-inch long, 200-component Raspberry Pi quadruped robot
- Leading 8 members in the mechanical design of a $1,600 Raspberry Pi quadruped robot

FIRST Tech Challenge Team - Lead Hardware and Strategist | Team of 10 (High School) August 2018 - May 2023

- Co-led the mechanical design process and assembled a robot that placed 2nd in the world (3000+ teams)
- Implemented a top-down system engineering methodology, reducing robot integration time
- Developed an objective-based process for strategy development resulting in a five-month competitive advantage

PROJECTS

Quadruped Robot [QUAD V2] | Team of 10 (Ongoing)

- Designed joint assembly exterior components and motor-driver mount for a motor with a cycloidal gearbox
- Created a motor-swappable 3-DOF joint assembly using 2 external gearbox casing configurations
- Utilized: SolidWorks, Power tools

Miniature Quadruped Robot [Mini-QUAD] | Team of 7

- Designed a compact bearing housing system that reduced stress on the hip servo and allowed a 6mm reduction in the upper leg width to 22.85mm
- Modular leg components were designed for additive manufacturing and serviceability to reduce cost and serve as a software test bed for QUAD V2
- Assembled, verified performance, and attached the miniature robotic legs to the chassis
- Utilized: SolidWorks, Power tools

Bluetooth Laser Turret | Team of 4

- Remote-controlled turret with 180° azimuth and 240° elevation capabilities
- All custom parts have corresponding ISO geometric dimensioning and tolerancing
- Utilized: SolidWorks, Arduino C++

ACTIVITIES

- Hackathons
  - Rocket with Landing Simulation (1-week) November 2024
  - Blackjack with probabilities (24-hours) September 2023
- TAMU Intramural Volleyball and Football August 2023 - Present
- BIG Event (Volunteer) March 2024
- High School Chess Club - Co-president August 2022 - May 2023
- High School Varsity Football Team - Captain August 2019 - December 2023
- High School Varsity Baseball Team - Member August 2019 - May 2022

SKILLS

- **Computer Skills**: SolidWorks (CSWP), MS Office Suite (Excel, Word, PowerPoint), Python, Arduino C++, Linux
- **Hands-On Skills:** Power Tools, Rapid Prototyping, Soldering