Westley Kleinman

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Duke University

B.S. Mechanical Engineering | Class of 2028 Innovation & Entrepreneurship Certificate

Work Experience

Boyd Cycling & Time Bicycles Intern 2025 | Landrum, SC & CU-ICAR, Greenville, SC

- Optimized RTM process: Enhanced carbon-rim fabrication by overhauling mold geometry and machine calibration, eradicating dry zones and standardizing resin distribution.
- Engineered impact tester: Conceived and built a custom wheel-impact rig (winch + electromagnetic stopper), validating rim durability to 40 J UCI standards.
- Scaled composite tech internationally: Transferred European carbon-injection protocols to CU-ICAR, accelerating Time Bicycles' U.S.A. rollout and underscoring cross-cultural technical adaptability.

Projects

Tri-Dimensional Topographic Map | Entrepreneurial Venture | 2021-Present

- Designed and produced 3D-printed trail maps providing undistorted topographic visualization
- Secured provisional patent and developed marketing strategy resulting in four-figure revenue
- Established partnerships with Visit Hot Springs and Arkansas NICA to expand market reach
- Applied skills in Fusion360, SolidWorks, and digital manufacturing techniques

Smart Water Bottle Cap | Co-Lab Grant Recipient | 2024 – Present

- Created a functional smart bottle prototype with real-time tracking capabilities
- - Utilized SolidWorks for design, Arduino for programming, and user testing protocols for real world proof testing

Bucket Washing Mechanism | EGR101 Freshman Design | 2024

- Collaborated to design and fabricate a cleaning system for CompostNow containers
- Reduced cleaning time by 43% through innovative mechanical design solutions
- Contributed to prototype development using SolidWorks and laser cutting technologies

Leadership and Activities

Cyberpatriot Team | Founder & Captain | 2019-2024

- Founded and led high school cybersecurity competition team to state championships (2021, 2024)
- Developed and implemented training program for 15+ team members across 3 competitive teams
- Designed real-time security strategies under competition constraints, achieving top state rankings

Duke Cycling Team | Team President | 2024-Present

- Represented Duke University in collegiate cycling competitions
- Collaborated with team members on training regimens and race strategies

MaccabiUSA Pan-American Athlete | 2023-2024

- Represented MaccabiUSA at the Pan-American games in Buenos Aires, Argentina for Cycling