

# Kolby Wade

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## Education

**University of Florida** – BS in Mechanical Engineering (GPA: 3.68)

May 2025

- Dean's List

## Experience

**Product Development Engineer**, SimpliFaster – Gainesville, FL

January 2024 – Present

- **Enhanced product durability** by optimizing the manufacturing orientation, resulting in a 50% increase in structural strength and significantly reducing wear and tear.
- **Designed and integrated complex electrical systems** for fully functional prototypes using ESP32, accelerometers, servos, boost converters, BMS modules, and LiPo batteries, enhancing product innovation and athletes' performance.
- **Developed and implemented C++ code** to control prototype operations, and designed companion apps using Flutter to enable seamless integration and user interaction with the products.
- **Managed and led diverse teams of engineers and manufacturers**, facilitating the effective market introduction and global rollout of innovative sports technology solutions.

**R&D Engineer Intern**, ValidFill – Bradenton, FL

August 2018 – November 2020

- **Developed and engineered a touchless valve cover for soda machines**, enabling their use during the pandemic; personally handled CAD design, testing, and electrical prototyping to ensure operational safety and compliance.
- **Designed and built a specialized testing machine** to rigorously evaluate the valve cover for 1.2 million customer cycles, ensuring it met Coca-Cola's stringent durability and performance standards.
- **Conducted extensive testing on electrical systems** to ensure current drop remained within regulatory limits, guaranteeing compliance and system reliability.
- **Optimized design for injection molding** by incorporating a minimum of 5-degree draft angles and modifying the design to accommodate sliders and other components, ensuring manufacturability and functionality.

## Projects and Involvement

**Formula SAE: Cockpit engineer**

<https://gatormotorsports.com/>

- **Designed and fabricated two carbon-fiber molds** for composite manufacturing, contributing to the development of a high-performance racecar for University of Florida.
- **Conducted Finite Element Analysis (FEA)** on mechanical parts to verify compliance with rigorous specifications and enhance design integrity.
- **Executed precision manufacturing of aluminum and steel parts** using mill and lathe machinery, producing units with tolerances maintained at  $\pm 0.002$  inches, ensuring seamless integration into high-quality assemblies.

**Autosampler Capstone Project: Electrical and controls team leader**

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- **Led a team of three engineering students** in designing the electrical and control systems for a 3-axis autosampler, enabling precise collection and dispensing of biomedical fluids.
- **Integrated sensors and actuators** to regulate temperature, automate sampling, and implement safety mechanisms, ensuring precise and reliable operation.

**Personal Project: Laser tag system**

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- **Implemented RGB lighting and sound feedback** on four homemade laser guns to display life status, ammo count, and battery levels, providing real-time game information to players.
- **Integrated laser and LDR sensor technologies** to precisely detect player hits by measuring light intensity variations, thereby enhancing game accuracy and overall user experience

## Skills

**CAD:** SolidWorks, Fusion 360, Inventor

**Analysis:** Abaqus, SolidWorks Simulation

**Software:** Python, C++, Flutter, MATLAB