

# Dominic Holifield

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Zionsville, IN 46077

## EDUCATION

Purdue University, West Lafayette, IN

*Aug 2020 - May 2024*

- Bachelor of Science in Mechanical Engineering, Minor in Computer Science
- GPA: 3.24/4.00

## SKILLS

- Programming (C++, C, Java, Python, HTML, CSS, Matlab)
- Robotics (Mechanics, Software, Electronics)
- Part Fabrication (Mill & Lathe)
- CAD (Autodesk Inventor, Fusion 360)
- 3D printing (FDM, PLA, Nylon, Cura)
- Oscilloscopes and Breadboarding

## EXPERIENCE

Competition Robotics, Purdue ACM SIGBots

*Aug 2016 - Present*

*Mechanics, Software, and Drive Team Member*

- **2022 VEXU Skills World Champion** (team BLRS2) defeating over 75 global universities
- **2020 Kalahari Classic Tournament Champion** (team 7701T) competing against over 150 teams
- Work with a large team to design, build and optimize static and dynamic systems for a competition robot through the design process with **CAD**, prototyping, and design improvements
- Construct robots using various manufacturing processes including **3D printing** and **metal fabrication** combined in assemblies with prefabricated parts
- Program control algorithms such as **PID**, pose tracking algorithms like **odometry**, and autonomous routes for robots combining chassis and mechanism controls
- Develop and maintain a complex **robot chassis control library** with a team of passionate undergraduates
- Utilize various **sensors** including optical shaft encoders, inertial measurement units, and infrared light sensors to optimize robots' performance
- **Operate robots** during matches to compete against universities from around the US and world

Purdue Undergraduate Research Expo, VIP Autonomous Motorsports Purdue

*Jan 2021 - May 2021*

*Undergraduate Researcher*

- Worked with a team to develop a waypoint-based approach to **autonomous driving and racing**
- Created **simulations in Unity** using a vehicle physics environment, a convolutional neural network, and PID control algorithms
- Worked parallelly to the Purdue Indy Autonomous Challenge Team

The UPS Store, Zionsville, IN

*Aug 2019 - Jan 2022*

*Store Associate*

- Assisted over 100 customers per day to ship and pack items to UPS standards
- Completed various tasks including printing, laminating, binding, and designing documents, flyers, and business cards

DoorDash, Zionsville, IN

*June 2022 - Present*

*Dasher*

- Manage food deliveries efficiently to complete orders quickly & work with customers to ensure satisfaction

## INTERESTS

- Skateboarding & Longboarding
- Cycling
- Hiking
- Tennis
- Spikeball
- Mechanical Keyboards
- Music
- Cars
- RC Planes