

# Jackson Vonderhorst

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## EDUCATION

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**University of Notre Dame** | Notre Dame, IN Expected May 2027  
*Bachelor of Science* GPA: 3.94  
Major: Computer Science | Supplemental Major: Applied and Computational Mathematics and Statistics  
Relevant Courses: Fundamentals of Computing, Discrete Math, Systems Programming, Data Structures, Logic Design

## EXPERIENCE

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**University of Notre Dame Engineering and Science Computing** | Notre Dame, Indiana December 2023 – Present  
*Engineering and Science Computing Student Worker*

- Aided customer support staff with building, reimaging and delivering technology to university faculty, staff, and students in the Colleges of Engineering and Science
- Provided technical support to customers purchasing technology through ESC

**Sunrise Day Camp** | Pearl River, New York May 2021 – Present  
*Unit Head*

- Head supervisor for a group of camp counselors supporting children battling cancer and their siblings in a fun, friendly, and safe environment to provide them with a positive escape from the challenges of living with cancer

**ACE Mentorship Program** | New York, New York September 2022 – May 2023  
*Intern*

- Calculated and implemented MEP systems such as ventilation, electrical systems, mechanical risers, and internal load calculations into a theoretical museum design
- Developed team projects through weekly meetings, professional office visits, and use of industry software

**Bergen Catholic IT Department** | Oradell, New Jersey September 2021 – June 2023  
*IT Associate*

- One of two students selected to provide tech support to staff members, students and parents
- Configured each student's MacBook and iPad with school software for the first day of classes

## LEADERSHIP AND ACTIVITIES

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**Notre Dame Robotics Football Team** September 2023 - Present  
*Mechanical Design Team*

- Use SolidWorks to create new parts for robots including net holders for wide receivers and bumpers for linemen

**Bergen Catholic First Robotics Team** | Oradell, New Jersey September 2021 – June 2023  
*Co-Founder and President*

- Team lead for designing, building, and coding the robot for tournament competition, team advanced to the State Championship and won the THINK award

## RELATED COURSEWORK OR PROJECTS

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**Engineering Design, Engineering Computing** | University of Notre Dame August 2023 – December 2023

- Designed various 3D printed projects including a cylinder valve in SolidWorks, using Excel, Arduino software, and servo motors to program the amount of water to let through the valve
- Created MATLAB application that used graphs to analyze energy consumption at Notre Dame

**Space Invaders Video Game** | Personal Project December 2023 – Present

- Developed a Space Invaders game in Python using Pygame, leveraging object-oriented programming for functionality and problem-solving, while designing all in-game assets through custom pixel art.

**Precision Fishing Bot with Multithreaded CV** | Personal Project March 2025

- Built a real-time automation bot using OpenCV and PyAutoGUI to detect and cast toward fish using screen capture and template matching.
- Optimized performance with multithreading and geometric targeting for sub-second response time. Includes visual debug tools and adaptive casting based on object distance.

## TECHNICAL SKILLS

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**Technical:** Proficient in Python, C, Java, MATLAB, SolidWorks, and Excel  
Familiar with HTML, CSS, JavaScript, C++, PyAutoGUI, OpenCV