

# Morgan Stratton

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## Education:

**Bachelor of Science, Mechanical Engineering** May 2027  
*Rose-Hulman Institute of Technology, Terre Haute, IN* 4.0 GPA  
*Status:* First-year student with freshman standing  
*Relevant Coursework:* Graphical Communications, Intro to Design, Computer Programming  
**Waterloo High School Diploma, Valedictorian** May 2023  
Waterloo, IL 4.4/4.0 GPA

## Experience:

**Turning Point Wellness Center, Waterloo, IL** April 2023 - July 2023  
*Chiropractic Assistant*

- Ran initial screenings on patients and filed patient records
- Administered heating pads, massage gun therapy, and removal of acupuncture needles

**Waterloo Country Club, Waterloo, IL** February 2022 - July 2022  
*Groundskeeper/Dishwasher*

- Kept golf course clear of debris and rebuilt sand bunkers
- Cleaned and disinfected all dishes and cooking areas and surfaces

## Activities:

**Rose-Hulman Human Powered Vehicle Team** Fall 2023 – present  
**Rose-Hulman NCAA D3 Men's Cross Country Team** Fall 2023 – present  
**American Society of Mechanical Engineers** Fall 2023 – present  
**ACES (Academic Challenge)** Winter-Spring 2023

- 2nd Place Individual Chemistry at Regionals and Sectionals

**Waterloo High School Cross Country & Track Team, Team Captain** 2019 - 2023

- Assisted coaches by leading workouts and motivating teammates
- All-Conference and All-Academic Conference 2022 - 2023

## Personal Projects (See [Portfolio website](#) for full descriptions, pictures, and other projects)

### Touch Sensitive Light Up LED Epoxy Resin Coffee Table

- An Arduino driven programmable LEDs with Touch Sensor Interface underneath a wood and epoxy tabletop.
- Skills learned and involved: *woodworking (machinery and hand tools), epoxy/resin, circuit design, mechatronics interfacing, soldering, programming, mechatronics (Arduino)*

### Electromyography Sensor Interface with Arduino

- Using a MyoWare EMG sensor, I used an Arduino to control servos, LED strips, and relays to perform various tasks (Ex. Translating the movements of my arm to a metal rod with a servo).
- Skills learned and involved: *data conversions, programming, mechatronics (Arduino), physical design, hardware (servos, LEDs, relays)*

### Magic Mirror

- Powered by a Raspberry Pi, the mirror has multiple widgets displaying. Arduino controlled LEDs surround the mirror.
- Skills learned and involved: *woodworking and finishing, Raspberry Pi, Arduino, hardware*

## Skills:

*Software:* SolidWorks, MATLAB, Python, HTML, CSS, JavaScript, C++, Arduino  
*Technical:* 3D printing, Woodworking,  
*Hardware:* Soldering, Circuit Design/Assembly, Arduino, Raspberry Pi  
*Language:* Conversational Spanish, *Illinois Seal of Bilingualism*