

# Laith Wattar

CWRU BAJA, Previous @ Lincoln Electric, ScribeAmerica  
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## EDUCATION

### Case Western Reserve University, Cleveland, OH

January 2023 - May 2026

- Major: Mechanical Engineering
- Relevant Courses: Programming in Java, Calculus 1-3, General Physics 1 & 2, General Chemistry 1, Chemistry of Materials, Computers in Mechanical Engineering, Differential Equations, Mechanical Manufacturing 1 & 2, Statics, Dynamics, Mechanical Engineering Analysis & Lab, Thermodynamics, Fluid Mechanics, Heat Transfer, Circuits, Logic Design, Biology 1-3, Design of Thermal and Fluid Elements, Finite Element Analysis (Graduate Course), Sustainable Manufacturing

### Rocky River High School, Rocky River, OH

August 2018 - June 2022

- Summa Cum Laude | 34 ACT, 1500 SAT
- Cumulative GPA: 4.3/4.0
- Honors/Awards: National Merit Commended Scholar; National Honors Society; Société Honoraire de Français; AP Scholar with Honors

## RELEVANT TECHNICAL SKILLS

### Skilled Programmer (Python, Java, JavaScript, C++, HTML, CSS, Matlab)

- Recreated Pacman using Python and PyGame
- Experienced with JUnit testing in Java
- Written 100+ Matlab scripts to create numeric approximations and graphs
- Coded numerous hobby projects in C++, such as a custom linear actuator controller for a BAJA Motion Racing Simulator

### Mechanical Manufacturing and Design

- Calibrated and maintained 20+ Makerbot, Dremel, BambuLab, FlashForge, Prusa, and Creality 3D printers, as well as a CARVEY CNC Machine
- 5+ years of experience with Ansys, SketchUp, OnShape, Fusion360, Solidworks, Solid Edge, and NX (assemblies, mechanical drawings, etc.)
- 4+ years of experience with PDM, Teamcenter, and Kenesto file management systems
- Hands-on metal fabrication and machine shop experience using machines such as waterjet, drill press, lathe, MIG/TIG Welders

### Electrical Experience

- Used soldering skills to create a full wall geometric LED panel, RC Hovercraft, IR Sensor Circuit, ARGB Controller, Working Replica Red Bull F1 Sim Wheel, Temperature Detection Circuit, and repair various electronics such as mobile phones and laptops
- Constructed projects using arduinos, ESP/STM32 and ESP8266 microcontrollers, FT232RL, and prototype PCB boards

## WORK EXPERIENCE

### MetroHealth Emergency Room - Medical Scribe

May 2025 - February 2026

- Experienced with HIPAA Standards and privacy laws
- Completed ~20-30 medical charts per shift for emergency room doctors
- Recorded chart and lab interpretations using *Epic* medical software

### Wattar Calligraphies - Founder, CEO

May 2025 - Present

- Completed over \$1000 in orders of custom designed Arabic calligraphies
- I used NX and SolidWorks to design the art, and I used BambuLab machines to allow for fast, in-house production

### Lincoln Electric - Tool Design and Plant Engineering Intern - Euclid, Ohio

March 2024 - August 2024

- Completed 200+ CAD parts for 15 projects ranging from coolant pump fixtures to electronics machine enclosures
- Collaborated with tool room to use CMM, Wire-EDM, plasma, lathe, and mill manufacturing processes

### Civic Center Supervisor – Rocky River, OH

August 2022 – May 2025

- Supervised staff of 40+ lifeguards
- Checked and maintained water pH, temperature, alkalinity, etc.
- Created lifeguard rotations and managed patron questions and concerns

### Civic Center Lifeguard – Rocky River, OH

June 2022 – August 2023

- Red Cross CPR certified
- Watched up to 100 pool patrons at a time
- Ensured adherence to the Civic Center rules and assisted in providing medical assistance and completing deckhand tasks

## RELEVANT ACTIVITIES

### BAJA SAE - CWRU MOTORSPORTS (projects are viewable at [laith-wattar.com](http://laith-wattar.com))

August 2023 - May 2026

- Designed 2025 and 2026 competition year steering wheels featuring a LCD display, rotary encoders, Otto push buttons, custom 3D scanned driver grips, and custom STM32 and LVGL software. I manufactured the frame using a waterjet machine and 3D printed the handles and enclosure.
- Designed a mating plate for a Michigan Scientific Wheel Force Transducer for our 2024 competition car. I conducted finite element analysis, 3D printed a prototype, and fabricated it using a waterjet and milling machine. We used the transducer to test lateral and radial loads applied to the wheels in the most extreme vehicle scenarios.
- Designed fixturing for the car welding rig and frame tube members
- Machined various bushings, spacers, and shock inserts using a lathe (delrin, brass, steel, aluminum, etc.)

**CWRU LIFTS (EXECUTIVE BOARD MEMBER)****January 2023 - May 2026**

- Social Media Chair (2023-2025) - Ran club Discord server and Instagram account with over 200 followers
- Design Chair (2025-2026) - Created 10+ graphics for advertising our club on campus and social media
- Increased Instagram social media interactions by 150% compared to previous years
- Collaborated with other students to set up lifting competitions and promote healthy and active lifestyles across campus

**CWRU MSA Social Chair (EXECUTIVE BOARD MEMBER)****April 2024 - May 2025**

- Planned events for the 400+ members of the club and collaborated with nearby universities for fundraisers and events

**CWRU RUGBY****January 2023 - May 2026**

- Active member participating in 10 hours of practices per week and 2 matches per month
- Played in lock, hooker, and wing positions

**Case Surgical Society****August 2023 - May 2026**

- Attended weekly GBs that examined case studies and reviewed surgical videos
- Practiced suturing skills on silicone pads to build muscle memory for proper knot tying and wound closure
- Performed human cadaver dissection in collaboration with the CWRU medical school

**Center for Civic Engagement & Learning****August 2025 - May 2026**

- Volunteered for community events, such as helping stock the CWRU food pantry

**SKILLS AND INTERESTS**

*Interests:* Coding, Machining, Soldering, CAD Design, Web Design, Circuit Design, Powerlifting, Robotics

*Technical:* Google Sheets; Google Docs; Canva; SketchUp; Python; Java; Matlab; Solidworks; FEA; Metal/Wood Working; Soldering; 3D Printing

*Languages:* English (fluent), Arabic (fluent), French (intermediate)