

LIAM CARLIN

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EDUCATION

Olin College of Engineering, B.S. Mechanical Engineering

May 2028

- **Relevant Coursework:** Multivariable Calculus, Linear Algebra, Modeling & Simulation, Software Design, Fabrication, Sensors Integration

SKILLS

- **Mechanical:** SolidWorks, PDM, Onshape, ANSYS, Fusion360, Arduino, 3D Printing, Mill, CNC Mill/Lathe, TIG Welding, Plasma Cutting, Sheet Metal, Laser Cutting, PCB Design.
- **Programming:** Java, JavaScript, HTML, Python, CSS, Racket, React Native, MATLAB, Arduino, Raspberry Pi, Git, GitHub, Linux.
- **Business Skills:** PPC, SEO, UI/UX, Copywriting, Data Analysis, AI Integration, Reporting, Profile Optimization, Photoshop, Illustrator.
- **Languages:** English (Native), Spanish (Advanced Proficient)

EXPERIENCE

Onshape by PTC | Technical Engineering Intern | Boston, MA

June 2025 – August 2025

- Led Onshape's first Large Language Model Optimization project to improve AI-driven search rankings and CAD-related query performance.
- Developed CAD learning models and technical examples to teach core Onshape modeling tools, assemblies, configurations, and advanced features to new users.
- Built automations using Make.com, Zapier, and SEMrush to help streamline technical marketing workflows and improve team efficiency.

CEO & Founder | TheBurbles | Boston, MA

March 2020 – Present

- Founded and scaled TheBurbles into a leading digital marketing agency, achieving 50% higher PPC results than competitors.
- Drove 300% growth for brands, including Unbrush, through innovative digital marketing strategies.
- Led AI-driven marketing initiatives, including predictive analytics and automated campaign management.

LEADERSHIP

Baja Project Team | Project Manager | Olin College of Engineering | Needham, MA

April 2025 – Present

- Leading a 83-member, 6-subteam engineering and business team in my initiative to deliver Olin Baja's first ever fully integrated 1-year design-to-fabrication cycle, driving major gains in build efficiency and team performance.
- Overseeing all aspects of vehicle development, including mechanical design, manufacturing, competition prep, SAE documentation, and cross-functional coordination across drivetrain, suspension, chassis, electrical, ergonomics, and business.
- Implementing new structure, processes, and initiatives to strengthen diversity, workflows, and make Olin Baja more competitive.

Catalyst | President | Olin College of Engineering | Needham, MA

December 2024 – Present

- Oversee and help deploy a \$70,000 student-managed fund supporting early-stage ventures at Olin College's oldest student organization.
- Meet with student founders to help develop ideas, refine business strategies, and support their growth to the next stage.
- Revitalized the club by securing guest speakers and expanding hands-on opportunities in real-world venture development.

PERSONAL PROJECTS

Scribblz – Window Drawing Robot | Onshape, Resin 3D Printing, CFD, Computer Vision

January 2025 – Present

- Designed a wall-climbing drawing robot that adheres to vertical glass surfaces using a CFD-optimized centrifugal impeller suction system.
- Prototyping a lightweight 3D-printed chassis with integrated shrouding, fully constrained motor mounts, and a Kiwi-drive system.

Thrust Vector Controlled Rocket | Onshape, 3D Printing, C++, Arduino, MATLAB

January 2023 – Present

- Built a thrust vector control system using Arduino and a gyroscope for real-time stabilization, with a custom CAD-designed two-axis gimbal along with a zero-fin surface for stabilization relying only on the thrust vectoring.
- Simulated complex dynamic flight behavior in MATLAB Simulink, incorporating a Kalman filter for enhanced noise reduction and state estimation. Optimized control algorithms using a PID Tuner to achieve precise trajectory tracking and stability throughout various flight phases.

Combat Robotics | NHRL | Onshape, 3D Printing, CNC Tools, Soldering

January 2023 – April 2023

- Engineered a 3-pound featherweight Battlebot for NHSRA competitions utilizing an aluminum chassis.
- Designed a vertical spinner weapon system driven by a 16,500 RPM brushless motor, optimizing for high torque and rapid engagement.
- Implemented a direct-drive drivetrain for maneuverability and a 3D-printed carbon fiber shell to maximize strength-to-weight ratio.

First Person View Drone | OnShape, CNC Tools, Soldering, 3D Printing

September 2022 – February 2023

- Designed and built a custom FPV drone with a CNC-milled durable carbon fiber frame designed and modeled in Onshape.
- Assembled and soldered all electronic components, including flight controller, ESCs, and motors, while programming onboard software to enable real-time flight control, stabilization, and data transmission for first-person view operations.