LIAM CARLIN

+1 617-507-9828 ▪ www.linkedin.com/in/Liamzcarlin ▪ Lcarlin@olin.edu ▪ LiamCarlin.me ▪ https://github.com/LiamCarlin

EDUCATION

Olin College of Engineering, B.S. Electrical & Computer Engineering   **2028**
- **Relevant Coursework:** Multivariable Calculus, Linear Algebra, Modeling & Simulation, Software Design, Fabrication, Sensors Integration

Winchester High School, Winchester, MA, High School Diploma   **2024**
- **Relevant Coursework:** AP Physics C, AP Calculus BC, AP Computer Science A, Engineering Design, Software Development, Marketing Skills

SKILLS

- **Programming:** C++, Java, Java Script, HTML, Python, CSS, Racket, React Native, MATLAB, Arduino, Raspberry Pi, Git, GitHub, Linux.
- **Mechanical:** SolidWorks. Onshape, Fusion360, Arduino, Photoshop, Illustrator, Formlab printers, general machine shop tools.
- **Business Skills:** PPC, SEO, UI/UX, Copywriting, Data Analysis, AI Integration, Reporting, Profile Optimization.
- **Languages:** Spanish (Advanced Proficient), English (Native)

EXPERIENCE

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.
- Managed a diverse client portfolio across e-commerce, real estate, and fashion industries.
- Led AI-driven marketing initiatives, including predictive analytics and automated campaign management.
- Focused on building long-term client partnerships and expanding service offerings.
- Positioned TheBurbles as a thought leader in AI-driven marketing solutions.

U14 Alpine Ski Coach | Quechee, Race Team | Quechee, VT   **December 2019 – Present**
- Coached U14 alpine ski athletes, leading them to state championships.
- Assumed leadership in the second year, overseeing team development and course design.
- Created a curriculum to improve racing skills and promote respect, inclusion, and sportsmanship.

Baja Project Team | Olin College of Engineering | Needham, MA   **August 2024 – Present**
- Designed, constructed, and tested an off-road vehicle for the BAJA SAE competition, focusing suspension design and tuning.
- Collaborated with a multidisciplinary team to ensure compliance with competition regulations while maximizing performance through weight reduction and torque management.
- Including CNC machining, and custom component assembly, ensuring durability in the build.
- Diagnosed and resolved mechanical issues during testing, refining the vehicle's overall stability and acceleration.

PROJECTS

Thrust Vector Controlled Rocket | *C++, Arduino, MATLAB, Physics, 3D Printing*   **January 2023 – Present**
- Designed and implemented a thrust vector control system for a rocket, utilizing Arduino for real-time data processing and control calculations. Integrated gyroscope-based stabilization for precise attitude control and developed a custom CAD-modeled two-axis gimbal to manage 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.

First Person View Drone | *OnShape, CNC Tools, Soldering, 3D Printing*   **September 2021 – February 2022**
- Designed and built a custom FPV drone using Onshape for CAD modeling, creating a lightweight, durable frame CNC milled from carbon fiber for optimal strength-to-weight ratio.
- 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.

Combat Robotics | NHRL | *Onshape, Soldering, 3D Printing, CNC Tools*   **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 precise maneuverability and a 3D-printed carbon fiber shell to maximize strength-to-weight ratio.