Liam Bayne

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SUMMARY

A driven engineering student passionate about advancing the global energy transition through sustainable design, mechanical innovation, and applied research. Proven success in engineering internships and student-led sustainability initiatives, integrating technical skills with project leadership, financial management, and cross-disciplinary collaboration.

EDUCATION

Cornell University **Graduating: May 2027**
- B.S. Mechanical Engineering **GPA: 3.6**

Corning Painted-Post High School **Graduated: June 2023**
- International Baccalaureate Diploma Recipient **GPA: 4.0**

EXPERIENCE

Plant Engineering Intern – Corning Incorporated (Wilmington, NC) **May 2025 – Aug 2025**
- Contributed to redesign of tensile strength testing machine by characterizing both mechanical and process failure modes through engineering analysis and high-speed video experimentation, yielding significant projected savings in both material and labor costs
- Designed housing brackets for optical sensors, tested their functionality, and ensured seamless integration with the machine's PLC code to enable proper operation and communication
- Navigated the Management of Change system to ensure compliance with safety standards, intellectual property requirements, and quality assurance protocols

Mechanical Engineering Intern – Corning Incorporated (Corning, NY) **June 2024 – Aug 2024**
- Applied scientific method and mechanistic understanding to improve glass melting process for flat consumer display glass
- Designed and conducted experiments to characterize new evaporative cooling technology
- Created script to automate data post-processes for future experiments
- Created computational fluid dynamics model of test section for comparison with data

Engineering Project Intern – SEPAC, Inc (Elmira, NY) **July 2022 – Aug 2022**
- Optimized and implemented new storage system software for 1000+ manufacturing tools
- Compiled an Excel dataset on various tools using measurements, photographs, and thorough descriptions to streamline inventory process
- Converted 2D engineering drawings of manufacturing fixtures to 3D models

LEADERSHIP & EXTRA-CARRICULAR

Cornell University Sustainable Design **Sep 2023 – Present**
- Operations-team: Finance Chair (January 2025 – Present)
  - Manage project budgeting and financial planning for 200-person organization, tracking expenditures and aligning procurement with technical needs of over 10 sub-teams
- Sub-team: Solar Panel Reboot (September 2024 – Present)
  - Lead mechanical design and fabrication for an indoor solar simulator in collaboration with the Energy and Environment Research Laboratory, including CAD modeling, component selection, and hands-on assembly/testing
- Sub-team: Ithaca Carbon Neutrality 2030 (September 2023 – May 2024)
  - Modeled multi-use building in Autodesk Revit to simulate heat pump designs
  - Conducted energy analyses of heat pump retrofits to evaluate life-cycle costs, CO2 emissions, and energy savings
  - Created recommendations based on results to optimize building electrification efforts

RELEVANT SKILLS - Excel, Access, Inventor, SolidWorks, MATLAB, COMSOL, PI, Design of Experiments

HOBBIES – Soccer, hiking, skiing, rock climbing, skateboarding, surfing, reading