# DAVID A. BOHAN

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## EDUCATION

**New York University** **Brooklyn, NY**
*Bachelor's in Mechanical Engineering and Computer Science* *September 2022– Present*

- **Relevant Courses:** Robotic Vision, Engineering Design Methods, Mechanics, Electricity Fluids and Magnetism, Dynamics, Mechanics of Materials, Measurement Systems, Data Structures and Algorithms, Machine Design

## EXPERIENCE

**The Boring Company** **Austin, TX**
*Mechanical Engineer Intern* *May 2025 - August 2025*

- Developed **low-pressure fluid** routing systems with valve & sensor integration, improving subsystem reliability
- Built a **mathematical model** mapping pressure inputs to fluid volume and tilt, validated with a Python script.
- Designed **level-sensing** systems using pressure transducers & strain-gauge instrumentation, reducing cost.
- Routed cabling in **CAD** for a major subsystem, supporting electro-mechanical integration and port accessibility.
- Designed weldments for controlled elastic deformation, applying **FEA** and **hand calculations** to ensure recovery.

**NYU Motorsports - Formula Student Electric** **Brooklyn, NY**
*Team co-founder & Design director* *May 2023 - Present*

- Designed a powertrain assembly with 98% motor-to-wheel efficiency using **SolidWorks**, **MATLAB**.
- Integrated tripod housing into wheel hubs, reducing powertrain costs by 10%.
- Developed suspension geometry using hand calculations and **Solidworks,** achieving high performance cornering.
- Designed uprights and wheel hubs in Solidworks, using **DfMA** principles and **FEA** for testing.
- Designed and performed **FEA** on the chassis, identifying and fixing failure points to increase structural rigidity.
- Led FSAE car design by creating timeline and deadlines, managing both Mechanical and Electrical teams.
- Led mechanical sub-teams for suspension, steering, chassis, powertrain, and brakes.

**Industrial Plastic Recycling Ltd** **Bucharest,Romania**
*R&D Mechanical Engineering Intern* *June 2024 - August 2024*

- Developed a vertical silo with load cell integration for precise pellet storage, using **SolidWorks** and **Python**.
- Integrated sensors into a film-flake silo to improve **flow efficiency** by 15% .
- Redesigned a sink-float washing line, increasing throughput by 10% and reducing downtime.
- Created cost-efficient container-based housing designs for temporary employees using SolidWorks.

**Industrial Mecano Ltd** **Bucharest, Romania**
*R&D Mechanical Engineer Intern* *May 2023-August 2023*

- Designed an **industrial mixer** with vacuum capabilities for plastic flake processing, using **SolidWorks.**
- Designed a food-safe enclosure for a multi-story machine in SolidWorks, achieving regulatory certification.
- Optimized torque-speed ratio with Python, improving volumetric flow rate by 12%.
- Developed a pneumatically-actuated roller to apply pressure on moving plastic fill, as a retrofit device using **DFA.**
- Managed in-house manufacturability constraints, reducing lead time by 20% using **DFM**.

## PROJECTS

**Covid-19 doctor face-shield manufacturing** **Bucharest, Romania**
*Personal project* *March 2021 – May 2021*

- Modified a standard face shield to suit the needs of local medical staff.
- Set up, optimized and maintained a printer farm to 3D print face shields.
- Led a team of 5 people to ensure on schedule manufacturing and stay in contact with local hospitals.
- Distributed to 20 hospitals and reached over 1000 doctors and medical staff.

## SKILLS & INTERESTS

**Mechanical Skills:** CAD (Solidworks (7+ years), Onshape), FEA, GD&T, DfMA, Excel/Google Sheets
**Manufacturing Skills:** 3D Printing, CNC Mills, Lathe, WaterJets, Laser Cutters, Hand Tools
**Programming Skills:** Python, C++
**Certificates:** Solidworks CSWA–Mechanical Design degree
**Languages:** English(Fluent), Romanian(Native), German(Elementary Proficiency)