Daniel V. Rosamond – Mechanical Engineering Student
DFAM • Fusion/Solidworks Design • Robotics • Machining & Additive Manufacturing
danielrosamond13@gmail.com | 917-499-2510 | linkedin.com/in/daniel-rosamond-905035309
Portfolio: danielrosamond.github.io

Education

University at Buffalo, Buffalo, NY **May 2028**
Bachelor of Science, Mechanical Engineering
Certificate: Electrical Power Systems (June 2024)

The Brooklyn Latin High School, Brooklyn, NY **June 2024**
- High School Regents Diploma and International Baccalaureate (IB) Diploma

Professional Experience

American Society of Mechanical Engineers (ASME), University at Buffalo

Project Lead, Secretary **September 2024 — Present**
- Designed and manufactured a 3D printed excavation and materials handling rover for IAM3D 2026, leading a 50-member team through requirements definition, mechanical design, and prototype iteration
- Engineered tank treads and drivetrain to sustain continuous operation under abrasive sand loading, validating geometry through bench testing and iterative failure analysis
- Structured the rover program into three independent 15-person subteams, each developing a distinct rover architecture, enabling parallel prototyping and design tradeoff evaluation
- Supervised, maintained, and implemented upgrades in a student lab including ten 3D printers and various machining tools such as a CNC and laser cutter, consistently utilized by 130 active members
- Drove organizational growth from ~20 to 130+ active members (projected 200+), scaling recruitment, onboarding, and multi-team technical participation

Engineer Coordinator in Training, University at Buffalo **Fall 2025 — Present**
- Training in event planning, budgeting, and coordination across 30+ engineering organizations, SEAS, and the Student Association

Technical Projects

FPV Drone (IAM3D 2025) **September 2024 — April 2025**
- Designed a fully 3D-printed FPV payload drone using DFAM, print-in-place, and friction-fit mechanisms, eliminating commercial fasteners and enabling rapid repair
- Achieved >2:1 thrust-to-weight ratio, ~16 min measured flight time, and ~4.9 kg measured payload capacity, validated through modeling and flight testing
- Engineered a PLA/TPU struct-core elastomer frame that survived 13 consecutive 40–60 mph impacts without structural failure; placed in top third of competition

50 lb Combat Robot (NHRL style Competition) **September 2025 — Present**
- Leading design and fabrication of a 50lb combat robot in a team of three. Modeled weapon inertia, stresses, and drivetrain loads; engineered a horizontal spinner model operating at 25kJ within safety parameters

Technical Skills

- CAD & Fabrication: Finite Element Analysis, SolidWorks/Fusion, Resin layups (GF/CF/KF), general machining
- Embedded & Robotics: Arduino, ESP32, Raspberry Pi, Circuit Design
- Programming: C/C++, Python, Matlab

Additional Information

Fire Safety Technician, Environment, Health, and Safety, University at Buffalo **August 2025 — Present**
- Diagnosed mechanical failures and performed field operations on safety devices under supervision
- Serviced, inspected, and maintained fire suppression and safety equipment around the university

Volunteering **July 2022 – March 2025**
- Provided college essay tutoring to students; students admitted into top universities including Vanderbilt, Emory

Languages
- Fluent: English, Polish, Latin