Brady Garrison

69 Brown St, Box 2879 | Providence, RI 02912 | E-Mail: brady_garrison@brown.edu
LinkedIn: https://www.linkedin.com/in/brady-garrison-46a126260/

EDUCATION

Brown University   Providence, RI | Expected Graduation May 2026
Concentrations: *ScB Mechanical Engineering* and AB *Computer Science*; Current GPA: 3.875/4.00
- **Relevant Coursework:** Fluid Dynamics, Solids, Thermodynamics, Materials Science, Deep Learning, Computer Vision

Pembroke Pines Charter High School   Pembroke Pines, FL | Class of 2022
Unweighted GPA: 4.00/4.00; Weighted GPA: 5.62/4.00; Class Rank: 1/452
- **Awards:** AP Scholar with Distinction (Score of 5 on 11/11 AP exams), National Merit Scholar

PROFFESSIONAL EXPERIENCE

Tiffany & Co.   Cumberland, RI | June 2024 – August 2024
Manufacturing Process Engineering Summer Intern
- Updated 30 work instruction applications that are used throughout global Tiffany manufacturing facilities using JD Edwards and Tulip software.
- Created and tested applications for inventory management, machine maintenance, and evaluation of machine efficiency in the machine shop for Tiffany & Co.'s largest manufacturing facility.
- Improved efficiency and quality control by using root cause analysis, lean six sigma, and Ishikawa methods.

Brown University, School of Engineering   Providence, RI | September 2023 – December 2023
Undergraduate Teaching Assistant
- Developed three laboratory projects for student groups involving soft materials engineering, robotics, and the properties of shape memory alloys. This included bills of materials, assembly procedures, programming frameworks, and rapid prototypes.
- Mentored student project groups to implement my project plans. Organized weekly meetings and status presentations.
- Performed weekly office hours and taught workshops on rapid prototyping.

Naval Research Laboratory, Distributed Intelligent Systems   Washington, DC | June 2021 – July 2022
Science and Engineering Apprenticeship Program, High School Intern
- Implemented Artificial Intelligence algorithms in Python to compete in limited information chess competition.
- Presented my findings and methodology at the Neural Information Processing Systems conference. Publication Co-Author.

ENGINEERING AND DESIGN EXPERIENCE

Brown University Formula Racing Team   Providence, RI | September 2022 – Present
Brakes Subsystem Lead (2023), Steering Subsystem Lead (current)
- Designing steering subsystem to decrease weight by approximately 25%, decrease steering ratio from 5.32 to 4.6. The design includes a steering wheel with custom fit ergonomic grips and a carbon fiber steering column.
- Designed and verified braking subsystem with CAD in SolidWorks, FEA in Ansys, CNC Machining, MATLAB live script calculations, and sensor measurements. Designed thermally optimized brake rotors and custom fit brake lines.
- Presented braking subsystem that passed safety inspection and received 4/5 points at 2023-2024 SAE IC Formula Competition. Max temperature decrease of 64%.

Brown University Wilhelmus Lab   Providence, RI | September 2024 – Present
Undergraduate Research Assistant
- Developing programs to control the motion of a metachronal shrimp robot using Arduino and Python.
- Integrating sensors such as cameras, ultrasonic sensors, flow sensors, and tactile whiskers for environmental mapping.
- Implementing computer vision approaches for object detection and feature recognition.

Brown University Materials for Clean Energy Lab   Providence, RI | January 2023 – May 2024
Undergraduate Research Assistant
- Cataloged properties of materials for the construction of solid-state batteries.
- Developed MATLAB code to solve diffusion equations to simulate infiltration of ions into a solid matrix.

TECHNICAL SKILLS AND CERTIFICATIONS

Software: SolidWorks, MATLAB, ANSYS, Tulip, Fusion 360, Git, Arduino, Anaconda, and Microsoft Office
Programming Languages: Python (TensorFlow, NumPy, Matplotlib, Scikit), Java, JavaScript, C, and HTML
Fabrication Skills: 3D Printing (PLA and SLA), Laser cutting, Woodworking, Milling, Lathing, Metalworking, CAM
Certifications: SolidWorks Associate, MITx 6.001x and 6.002x Python Programming, Tulip App Building