

# Dillan Jagannath

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## EDUCATION

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### Georgia Institute of Technology

*Bachelor of Science in Mechanical Engineering; GPA: 4.0/4.0*

Atlanta, GA

May 2028

## SKILLS

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**Software/CAD/FEA:** CATIA, SolidWorks, AutoCAD, ParaView, OnShape, Microsoft Suite

**Programming:** MATLAB, Python, Arduino, R, Java

**Machining:** 3D Printing (FDM, SLA, SLS), Waterjetting, Laser Cutting, CNC Milling and Turning, Hand/Power Tools

**Concepts:** Statics, Physics, Differential Equations, Linear Algebra, Multivariable Calculus, Computational Physics, Scientific Programming, Statistics

## WORK EXPERIENCE

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### Invention Studio at Georgia Tech

Sep. 2025 – Present

*Provisional Prototyping Instructor*

Atlanta, GA

- Training peers on safe, effective use of rapid prototyping tools including 3D printers, laser cutters, and power tools
- Supporting student design projects by advising on manufacturing methods and material selection
- Collaborating with senior PIs to maintain equipment and improve lab accessibility for 1,000+ users

### Wasatch Photonics

May 2024 – Aug. 2024

*Electrical Technician Trainee*

Morrisville, NC

- Collaborated with senior engineers to manufacture, inspect, and test 150+ PCBs for commercial spectrometers
- Troubleshoot and performed root-cause analysis on spectrometer modules, reduced debugging time by 15%
- Documented 20+ testing procedures and results, streamlined knowledge transfer between teams
- Coordinated with cross-functional teams to implement design improvements based on testing feedback

### Mathnasium Apex Middle Creek

Jun. 2023 – Jul. 2025

*Lead Instructor, Acting Assistant Center Director*

Apex, NC

- Directed personalized math instruction to 80+ PK-12 students, improved students' state exam pass rates to 100%
- Managed daily operations, scheduled staff members and ensured smooth student flow for 50+ lessons per week
- Oversaw training of 10 new hires, created training materials and assessed trainee performance
- Led five yearly marketing outreach events, partnered with local elementary PTAs and increased enrollment by 20%
- Developed methods for student progress tracking and curriculum organization, increased five-star review frequency by 200% and instructor efficiency by 30%

## PROJECTS

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### FIRST Robotics Competition Robot

Jan. 2025 – Apr. 2025

- Led mechanical design and fabrication of competition robot featured swerve-drive system, custom two-stage elevator, articulating wrist intake, and vision-assisted targeting
- Engineered and iteratively refined 50+ custom brackets and mounts to balance weight, strength, and durability
- Engaged with programming and electrical teams to integrate sensors, path-planning algorithms, and drivetrain optimization, improved speed and maneuverability by 40% and scoring cycle time by 25% over season
- Presented design strategy and mechanical analysis to industry judges during regional and state events

### American Rocketry Challenge Rocket

Sep. 2024 – Apr. 2025

- Created and fabricated competition rocket with custom control surfaces and optimized weight distribution
- Performed CFD analysis and applied computational methods to simulate flight performance and optimize geometry
- Analyzed and adjusted mass distribution to consistently reach target altitudes and times within 1.5% error

## LEADERSHIP

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### FIRST Robotics Competition

Jan. 2022 – May 2025

*Team Captain, Mechanical Lead, Drive Captain*

- Directed strategic planning, design reviews, and fabrication schedules for 50+ member team
- Mentored 30+ new members on safety, design principles, and machining, increased subteam productivity by 30%
- Led team strategy and competition operations, coordinated drive team and scouting to maximize performance