

JOHN APESSOS

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EDUCATION

Cornell University College of Engineering, Ithaca, NY

Bachelor of Science in Mechanical Engineering, Class of 2027

Relevant Coursework: System Dynamics, Fluids Mechanics, Mechanics of Materials, Dynamics, Mechanical Design, Thermodynamics, Statics and Mechanics of Solids, Thermodynamics, Probability & Statistics, Multivariable Calculus, Differential Equations, Linear Algebra, Physics Mechanics, Electricity and Magnetism, Oscillations/Waves/Quantum Physics

Scarsdale High School, Scarsdale, NY 2019 - 2023 Honors: Signifer Honor Society (for academic excellence)

Relevant Coursework: Advanced Topic in Entrepreneurship, Advanced Topic in Calculus BC, Physics, Chemistry, Biology, Design and Build, Robotics, Digital Logic Design

EXPERIENCE

Cornell University Autonomous Drone 2024 - present President & Full Technical Lead

- Leading development of a fully autonomous gesture controlled, mine detecting, drone swarm for the International Aerial Robotics Competition (Mission 10)
- Designed and built a fully automated 30" prop heavy-lift carrier drone with 30" props to deploy high-speed drones at altitude; designed for 150 lb payload and future modular use
- Overseeing mechanical direction across structural design, aerodynamics, and materials under high-stress flight conditions
- Managing full CAD pipeline: modeling, validation, and integration with electronics/control systems; using CNC machining for carbon fiber and aluminum parts
- Supporting autonomy systems including obstacle avoidance and retrieval via retractable grabber mechanism
- Proficient in Creo, Fusion 360, and OnShape; training team members in advanced CAD workflows
- Overseeing team financials and ensuring smooth operation across all technical subteams

Scarsdale High School Robotics Team - Robo Raiders 2019 - 2023 Mechanical and Gearing Mechanism Engineer

- Oversaw the design of the intake and elevating mechanisms
- Served as Lead CAD Designer, creating designs for a robot for the FIRST Tech Challenge Competition.
- Managed and supervised new team members
- Trained new members in effective use of Fusion 360 for FTC
- Raised over \$1000 through outreach efforts

Jawz Aquarium April - June 2023 Aquarist and System Design Intern

- Maintained the chemical components required for healthy aquarium environments
- Designed a new online system for managing customer livestock orders
- Assisted customers with purchasing appropriate aquarium livestock to enhance self sustainability and unique environment appearance

Weill Cornell Medical College, Englander Institute for Precision Medicine July - August 2022 Intern

- Coded Python scripts to analyze large datasets
- Developed metadata files from cancerous genomic DNA inputs
- Collaborated with professors and research groups on various medical projects

SKILLS / OTHER

Software: Creo, Solidworks, Ansys, Fusion, OnShape, Java, Matlab, C++, Python, 3D printing, CNC Milling

Languages: Greek (fluent), French (fluent), Spanish (intermediate)

Interests: Tennis, Sport Fishing, Swimming, Aquarist, Horticulture, Hardware Repair