

# ALYSSA SCHWARTZ

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## EDUCATION

CORNELL UNIVERSITY, College of Agriculture and Life Sciences

Ithaca, NY

Bachelor of Science in Biological Engineering

Anticipated Graduation: May 2028

- New York State Board of Education Award for Academic Excellence (Scholarship)
- Relevant Coursework: Physics I and II, BIOC 1500

## WORK EXPERIENCE

### CU DESIGN BUILD FLY

Ithaca, NY

*Cornell University, Mechanical Subteam*

*September 2025 – Present*

- Contribute to the development of a radio-controlled aircraft for the annual AIAA International Design Build Fly Competition, integrating structural, aerodynamic, and systems-level considerations into the final prototype
- Design and manufacture custom airframe components using SolidWorks, advanced 3D printing, and carbon-fiber layup techniques, ensuring mechanical reliability while optimizing physical properties
- Evaluate aircraft performance through iterative analysis of failure modes, structural constraints, and aerodynamic limitations, developing engineering solutions to strengthen flight performance
- Collaborate with cross-functional subteams to integrate propulsion, control, and structural systems, supporting a data-driven, analytically focused design environment

### JASON LEWIS LAB

New York, NY

*Memorial Sloan Kettering Cancer Center, Summer Intern*

*May 2023 – Present*

- Conducted research on cellular state interactions to identify mechanisms that induce cancer cell death
- Analyzed 100+ blood samples and PET/CT datasets, and contributed to tissue collection in mouse models to assess therapeutic efficacy, centering on ferroptosis and senescence in pancreatic ductal adenocarcinoma
- Presented research updates to a group of 20–30 colleagues at weekly lab meetings, strengthening my skills in presenting complex data, facilitating critical discussions, and enhancing collaborative knowledge sharing
- Developed a strong proficiency in cell culture techniques, which enabled me to train and supervise other interns in the preparation, maintenance, and monitoring of cultures, improving technical accuracy

### FTC ROBOTICS TEAM

New York, NY

*Spence School, President*

*September 2020 – May 2024*

- Designed, engineered, and programmed robots for 3 FTC competitions, integrating mechanical design, coding, and testing. Advanced to the Super Qualifier in 2020, 2022, and 2023 and reached the New York City Championship in 2021, competing against schools across the New York area
- Expanded team from 4 to 20+ active members, growing outreach efforts to other schools and the community
- Facilitated daily team meetings and mentored new robotics members in design, coding, and strategy
- Programmed in Java for autonomous and tele-op tasks to complete predefined competition objectives

## ADDITIONAL EXPERIENCE

### PARK AVENUE SYNAGOGUE FOOD PANTRY

New York, NY

*President*

*September 2018 – May 2024*

- Managed the daily operations of a food pantry serving thousands of New Yorkers, overseeing a \$50,000 annual budget, food acquisition, real-time distribution, special events, and the coordination of 100+ volunteers.
- Coordinated directly with the Food Bank of NYC to secure and distribute thousands of pounds of food weekly.
- Implemented sustainable initiatives (clothing and reusable drives) to benefit additional community members
- Designed a lasting organizational infrastructure, including programmable spreadsheets, automated reporting, and food tracking systems that simplified operations and enabled efficient use year after year

## SKILLS

- **Technical skills:** Java, Python, R Studio, TinkerCad, Onshape, SolidWorks
- **FTC Robotics Awards:** Winning Alliance-Captain (2023), Innovate Award 2nd Place, Finalist Alliance, Inspire Award (2022), Innovate Award 2nd Place, think Award (2021)
- **Interests:** Crochet, Culinary Arts, Aerial Silks, Dance