

Isabel Chang

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY
Mechanical Engineering, **GPA: 4.046**

Expected May 2027

Selected Coursework: Mechanics of Engineering Materials • Statics • Introductory Fluid Mechanics • Thermodynamics • System Dynamics • Dynamics • Linear Algebra • Differential Equations

River Hill High School, Clarksville, MD

May 2023

GPA: 4.86(W)/4.0(UW); Completed Project Lead the Way Engineering Program, National Merit Commended Student

SPECIALIZED SKILLS

Technical: SolidWorks, Autodesk Inventor, Fusion 360, CAM, MATLAB, composite layups, vacuum bagging, tooling preparation, machining using manual mills and lathes, working knowledge of Java and Python, Excel

ENGINEERING EXPERIENCE

Monocoque Subteam Lead, *Cornell FSAE Racing*, Cornell University

Fall 2023-Present

- Collaborate with 60+ students to design, build, and race an electric Formula SAE racecar
- Responsible for the design, manufacturing, and analysis of carbon fiber monocoque including ply schedule, geometry, torsional stiffness tests, and in-house composite layups
- Coordinate system packaging and integration with all 5 mechanical and 3 electrical subteams
- Designed and optimized the protective structures including the roll hoops and front impact structures
- Presented and defended engineering decisions throughout multiple stages of design review and feedback

Mechanical Fabrication Intern, *Johns Hopkins University Applied Physics Lab*, Laurel, MD

May 2025-Aug. 2025

- Supported composite fabrication processes, including layups, tooling preparation, and bonding assemblies of advanced prototype and flight hardware under the Materials and Processing Engineering Group
- Created 2D ply designs, authored work order, prepared additively-manufactured tooling, and laid up composite prototype nosecone supporting NASA's Dragonfly space mission

Manufacturing Engineering Intern, *Johns Hopkins University Applied Physics Lab*, Laurel, MD

2021-2023

- Summer and academic year-long internship program under the lead manufacturing engineer, from 6/2021 - 5/2023
- Assisted composite and inspection engineers, created detailed CAD models to optimize space in machine shop, presented models to project leaders
- Analyzed and created infographics of raw historical machine data using Excel

LEADERSHIP EXPERIENCE

Breakdancing Club President, *Cornell's Absolute Zero Breakdance Club*, Ithaca, NY

May 2025 - Present

- Delegated tasks, managed group dynamics, directed communications with other organizations, planned performances, and oversaw executive board meetings to ensure successful practices and performances
- Created original choreography for performances and engaged with local breaking community through workshops and open practices

Founder of Region 7 Care Package Program, *Region 7 Acro United*, Laurel, MD

2022-2023

- Worked with R7 Acro United, a 501C3 non-profit organization, to develop a care package program for injured acrobatic gymnasts in Region 7 (Maine to South Carolina)
- Provided seed money, planned fundraisers with the executive board, ran fundraisers at competitions

Volunteer Coach, *Emilia's Acrobatics and Gymnastics Club*, Laurel, MD

Fall 2022

- Coached specialty flyer training sessions for all levels, assisted in advancing flexibility, strength, hand-balancing skills

ACTIVITIES

Former elite acrobatic gymnast: competed at 12 international competitions including the 2022 World Games in Birmingham Alabama and three World Championships representing Team USA; performed on America's Got Talent Season 17