

Caroline Gillum

EDUCATION

Villanova University - College of Engineering, Villanova, PA

May 2028

Bachelor of Science in Mechanical Engineering, Minor in Engineering Entrepreneurship

GPA: 3.96/4.00 | Dean's List

Courses: Thermodynamics, Mechanics of Materials, Statics, Dynamic Systems, SolidWorks, MATLAB, Engineering Entrepreneurship

New Trier High School, Winnetka, IL

June 2024

GPA: 3.95/4.00 | Honor Roll, ACT: 35/36, AP Scholar with Distinction Award, Illinois State Scholar

ENGINEERING EXPERIENCE

Newell Brands Quality Engineering Internship, Atlanta, GA

Summer 2026

Graco Baby Car Seat Project

- Identified noise-related concerns for Graco car seats by analyzing customer complaints and internal quality data
- Designed a testing fixture to replicate real-world consumer usage and conducted testing to evaluate product performance
- Developed an acceptable noise and vibration specification aligned with safety standards and user expectations, now implemented in Graco car seat development to determine launch readiness

Engineering Entrepreneurship Minor Project, Villanova University

Summer 2025

EcoSight AR Glasses

- Designed and prototyped "EcoSight", an AR-based concept for smart glasses to enhance ecotourism through real-time translation, navigation, plant/animal identification, and safety features
- Spent 3 weeks in Panama, partnered with a rural coffee farm to conduct stakeholder interviews to inform product features
- Created and presented a business model and prototype tailored to Panamanian ecotourism ventures to local partners integrating customer feedback and technical feasibility insights

Engineering Interdisciplinary Project, Villanova University

Fall 2024

Wearable RFID Design Project

- Designed "Catpass", a wearable college dorm key to address challenges of misplaced University IDs
- Obtained experience in team setting with project management, research, development, prototyping, testing SolidWorks and AutoCAD software, and analytical problem solving
- Organized project from research, design, and through final design presentation to faculty and industry professionals
- Product nominated and awarded 1st place in Villanova's College of Engineering Freshman Engineering Showcase

Go Baby Go, New Trier High School

Spring 2022-2023

Team Captain (Senior Year)

- Working as a 10-person student team, customized seating position, steering mechanism, and power controls of Power Wheel ride-on electric cars for children with Spina Bifida to provide primary mobility equipment in place of an expensive wheelchair that may be out of financial reach for the family
- Developed battery cars to enable children to experience the social, physical and developmental benefits of mobility at home and on the playground
- Collaborated with University of Delaware, Illinois Spina Bifida Association, and Chicago based Shirley Ryan Ability Lab

SKILLS

Software: SolidWorks **Programming Languages:** MatLAB, R Studio

LEADERSHIP & ACTIVITIES

Special Olympics, *Volunteer Coordinator* | Villanova University

- Organized and planned competition event logistics and volunteer allocation for Fall Fest Special Olympics Weekend

Society of Women Engineers, *Member* | Villanova University

Villanova Club Running, *Member* | Villanova University

OTHER WORK EXPERIENCE

Wild Child Toy Store, *Sales Associate*, Glencoe, IL

June 2023 – 2025

- Responsible for sales, pricing, financial transactions, and using product knowledge to deliver exceptional customer service
- Trusted by owners to co-manage the store when they were out of the country for a month