

# SUNNY CARLIN QI

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## EDUCATION

### COLUMBIA UNIVERSITY, THE SCHOOL OF ENGINEERING AND APPLIED SCIENCE

NEW YORK, NY

BACHELOR OF SCIENCE, COMPUTER ENGINEERING

EXPECTED MAY 2026

- Cumulative GPA: 4.06/4
- Relevant Courses: Introduction to Electrical Engineering, Discrete Mathematics

### NEW YORK UNIVERSITY, TANDON SCHOOL OF ENGINEERING

NEW YORK, NY

COMPUTER ENGINEERING (COMPLETED FIRST YEAR OF ENGINEERING STUDIES)

SEPTEMBER 2022 – MAY 2023

- Cumulative GPA: 3.92/4; Dean's List (all available semesters)
- Relevant Courses: Data Structures and Algorithms, Object Oriented Programming

## RELEVANT EXPERIENCE

### COLUMBIA FORMULA SOCIETY OF AUTOMOTIVE ENGINEERS

NEW YORK, NY

MEMBER OF THE POWERTRAIN AND HIGH VOLTAGE DIVISIONS

SEPTEMBER 2023 – PRESENT

- Revised accumulator to relocate digital ports (e.g. USB) and include an LED indication system using Solidworks
- Designed accumulator support tabs to endure static, sheering, and turning stresses with a minimum factor of safety of three
- Conducted Solidworks stress simulations on support tabs accounting for various forces (e.g. gravitational) and racing conditions
- Prototyped portable power supply containment system to provide convenient and accessible vehicle refueling

### RAPID ASSEMBLY AND DESIGN PROJECT

NEW YORK, NY

HEAD OF PRODUCTION

SEPTEMBER 2022 – DECEMBER 2022

- Led engineering team to devise marketable product of hand-held assistive cleaning device called the "AutoScrub" to enhance accessibility of traditional cleaning chores for individuals with mobility difficulties
- Leveraged TinkerCAD to map principal circuit design, subsequently employing Arduino to program the physical circuits for scrubbing power and timer controls
- Designed, printed, and assembled a protective CAD chassis with Fusion 360 to contain electronic components for the AutoScrub

### EVERYDAY ASSISTIVE TECHNOLOGY VERTICALLY INTEGRATED PROJECT

NEW YORK, NY

MEMBER

JANUARY 2023 – MAY 2023

- Collaborated with members to identify accessibility barriers and proposed innovative technical solutions such as motion detection belts and haptic feedback to prevent collision accidents for the visually challenged
- Produced braille-embossed music sheets, enabling blind musicians to more easily practice and perform musical pieces
- Taught blind musicians for two hours each week at the FDMG music school to use the Tidal music composition software

## EXTRACURRICULAR ACTIVITIES

### COLUMBIA ECONOMICS REVIEW (CER)

NEW YORK, NY

PODCAST TEAM MEMBER

SEPTEMBER 2023 – PRESENT

- Researched the economics and business practices behind the video game industry (e.g. exclusive titles, walled gardens, etc.)
- Produced a script explaining and analyzing business models and developments of the video game console industry
- Recorded and edited a 25-minute-long podcast, which was released on the CER website

### STANFORD UNIVERSITY RURAL EDUCATION ACTION INTERNSHIP

SHANGHAI, CHINA

INTERN AND RESEARCH PAPER CO-AUTHOR

JUNE 2021 – JULY 2021

- Collaborated with a team of researchers to produce and edit a paper on the relationship between caregivers' mental health and the educational outcomes of rural Chinese students
- Extrapolated data from nationwide surveys and identified critical link between lower socio-economic statuses to a greater prevalence of mental health issues among caregivers
- Engaged in 15 roundtable discussions with fellow researchers discussing significant trends and findings based on the data collected
- Co-published paper "Examining the Relationship between Caregiver Mental Health and Student Outcomes in Rural China" in the *International Journal of Environmental Research and Public Health* (IJERPH)

### MUSICAL MENTORS COLLABORATIVE

NEW YORK, NY

VOLUNTEER PIANO TEACHER

SEPT 2023 – PRESENT

- Receive lessons in pedagogical techniques and mentorship strategies from Columbia Department of Music professor Peter Sussner
- Teach 45-minute piano lessons for a 5-year-old student at P.S. 145, The Bloomingdale School on a weekly basis

## ADDITIONAL INFORMATION

**Languages:** Mandarin (Native)

**Skills:** MS Office (Word, Excel, PowerPoint), Autodesk Fusion 360, Solidworks, Ansys, Python, C, C++, Java, React, HTML, Javascript, Arduino, Unity, Vim, Jupyter Notebook, LaTeX, Soldering, Laser cutting, 3D printing

**Interests:** Piano, Music composition, Skiing, Tennis, Video Games, Art Museums, Anime, Sci-fi novels, Sketching, Podcasts