William Wang

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EDUCATION

Columbia University, Fu Foundation School of Engineering and Applied Science — **New York, NY**
Bachelor of Science, Materials Science — *August 2022 – Present*
Expected Graduation: May 2026

Polytechnic School — **Pasadena, CA**
GPA: 4.15 — *August 2018 – June 2022*
John Locke Essay Competition – Commendation in History, AIME Qualifier, National Chemistry Olympiad Nominee

EXPERIENCE

MeetKai — **New York, NY**
Front-End Intern — *June 2023 – August 2023*
- Developed ray cast vehicle physics and controls for webapp to be used by all Metaverse worlds
- Used Rust compiled web-assembly and Typescript to implement Pacejka's magic formula for tire physics, suspension models using f=kx, debugging high-speed crashes with physics engine, setup generalized vehicle implementation, and created new mobile UI.

Columbia Daily Spectator — **New York, NY**
Product Designer — *September 2022 – Present*
- Learning in-depth process of analysing market potential of developing products and how to evaluate the market through carefully crafted discrete and explicit customer survey questions
- Using Figma to create the user interface designs for the new Columbia Spectator app

Columbia University Formula Racing — **Shenzhen, China**
Dynamics and Low Voltage Researcher — *September 2022 – Present*
- Researched and pitched various suspension ideas to the team before designing the new A-arms using SolidWorks including meeting machining standards through timely communication with school's machinist
- In charge of soldering and testing low voltage circuits such as BSPD using oscilloscopes and multimeters

Armani Lab USC — **Los Angeles, CA**
Research Intern — *June 2021 – August 2021*
- Collaborated with 2 Ph.D. students and 2 professors in research studying tuneable optical diffraction gratings
- Manufactured PDMS diffraction gratings, facilitated experimental procedures, and recorded data
- Led and automated data analysis of experimental results through image processing using Python and various modules such as Matplotlib, NumPy, SciPy, OpenCV, and PIL in a published, peer-reviewed research paper

PROJECTS

Infinity Cube — **Pasadena, CA**
- *Skills: SolidWorks CAD, Arduino*
- Designed an infinity cube and programmed addressable RGB LED lights using Arduino microcontroller

2022

Whack a Mole — **Pasadena, CA**
- *Skills: Arduino, Electrical Design, SolidWorks CAD*
- Designed a Whack a Mole game using one Arduino Uno, Shift Registers, LED Buttons, Resistors, and LCD display

2022

RC Drone — **Pasadena, CA**
- *Skills: BetaFlight*
- Designed a RC Drone using DJI's FPV system, an ESC flashed with BetaFlight, and brushless DC motors

2022-2023

Amazon Scraper — **Pasadena, CA**
- *Skills: Full-Stack Development, Nodejs, React, Expressjs, Nginx*
- Developed a website that analyses data from amazon using an Express framework for the backend, Nginx reverse proxy, and React framework for the frontend.

2022-2023

ADDITIONAL SKILLS AND INTERESTS

- **Technical Skills:** Python, Java, Figma, SolidWorks CAD, Arduino, JavaScript
- **Languages:** English (Fluent) and Mandarin (Conversational)
- **Interests:** Badminton, Running, Piano, Beetle-Keeping

Personal Website: wwangg22.github.io/webtest