Ruofei Tong

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EDUCATION

Cornell University, College of Engineering **Ithaca, NY**
Bachelor of Science in Mechanical Engineering | Minor in Architecture *expected May 2026*
GPA: 3.82 / 4.0 | *Dean's List*
Honors: Cornell University, AAP, Edward Palmer York Memorial Prize *Spring 2023*
Recognized among top 5 of 80 students for architectural design, physical modeling, and visual presentation

SPECIALIZED SKILLS

Mechanical & Fabrication: mechanical design; FDM printing, laser cutting, lathe, mill; shop-trained (bandsaw, drill press, sander, table saw); CAM and CNC training in progress (Fall 2025); wood and metal fabrication
Mechatronics & Programming: Arduino-based systems, breadboarding, basic circuit design and testing; introductory Python, binary C++, and Arduino programming
Media*:* Photography, videography, video editing
Software: SolidWorks, Flotherm XT, Bambu studio, Rhino + Grasshopper, Adobe suite (Photoshop, Lightroom, Premiere, Illustrator), Blender (3D modeling and rendering), Microsoft Office
Languages: Mandarin (Native), English (Bilingual)

ENGINEERING / DESIGN EXPERIENCE

Servotop Co., Ltd. **Shenzhen, China**
Engineering Intern *Jun 2025 – Jul 2025*

- Identified inaccuracies in the company's thermal modeling process using Ansys Icepack; researched and proposed new CFD workflow with Flotherm XT for accuracy and simplicity
- Redesigned thermal system by modifying the radiator, fan selection, and chassis geometry to create effective airflow; validated new workflow by simulating airflow and thermal behavior with *ST4* Servo Driver
- Achieved up to 35% temperature reduction at rated 5.5A current and 58% at 16.5A overdrive current

Cornell University Autonomous Underwater Vehicle*,* **Ithaca, NY**
Mechanical Engineering Team Member *2023 onwards*

- Designed Sirius Manipulator: specifically designed for capturing irregular cylindrical objects; new actuation pattern using 4 TPU strings actuated by two internal gear sets driven by a single servo to wrap around objects
- Designed Polaris Manipulator: general purpose 4-bar linkage manipulator; optimized link geometry and used new end-effector, achieving 1108% clamping force at only 43.04% of the original cost
- Established a modular design approach and proposed standardization to streamline future development and reduce prototyping and repairing turnaround time
- Placed 3rd place out of 40+ teams in the 2024 *RoboSub* international Competition

LEADERSHIP EXPERIENCE

Masters Park, DingQuan Craftsmanship Museum **Shenzhen, China**
Project Lead, Videographer, and Website Designer *Summer 2022*

- Filmed and edited the documentary film: *The Heart of Craftsmen* with DSLRs stabilized by gimbals, custom audio & light setup, and edited using Premiere Pro
- Published by Longgang District Culture and Sports Bureau of Shenzhen
- Designed a dedicated website for the *DingQuan Craftsmanship Museum*

Project Teens Gleans **Shenzhen, China**
Initiator and project lead *Winter 2021*

- Organized an exhibition and auction, raised over 20,000 Yuan
- Launched a series of online lectures on traditional Chinese architecture, featuring a senior researcher/engineer at the National Palace Museum, attacked over 2,000 views in the start-up lecture; Supervised social media account, achieving 12,215 views during the first series of events.
- Secured a collaboration with *Masters Park*, a community of more than 300 inheritors of intangible Chinese heritage.