

ROLAND YAN

EDUCATION

New York University (B.S.) (2021-25)
Major: Biomolecular Engineering
GPA: 3.7



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EXPERIENCE

- Incoming Big Data Mining/Analytics Intern @ Pfizer Inc (Jun 22-Nov 22)
 - I will be working on strain maintenance databases, digital platform implementation, and big data mining.
- Chief Executive Officer @ [Cyber](#) (2021-22)
 - Founded a startup focused on Cybernetic Research, and spearheaded development in Quantum Hybrid CNN Diagnostic Algorithms to better identify typhoid, influenza, melanoma, breast cancer, and more. Also designed and built VTOL Organ-delivery UAVs, with 6 prototypes, and 22 drone flight tests for stability, routing, and tissue damage.
 - Advised by NYU Entrepreneurship Institute, Y-Combinator Summer Sprint Program, & Future Labs. Won TandonMade Challenge for \$1,000. Partnered with Citiblock Health.
- Systems and Robotics Engineer @ International Space Challenge (2020-22)
 - Designed and tested a lunar rover & chemical separation/ISRU units for Helium 3, Oxygen, and Water extraction. Built an inverted mass spectrometer to redistribute the charged ions into separation chambers. Designed Satellite Array studying Van Allen Belts, anti-matter formation, & South Atlantic anomaly.
- Chief Executive Officer/Founder @ [NovaCrypt](#) (2019-22)
 - NovaCrypt is a 501(c)3 umbrella nonprofit organization developing impactful open-source research in astronautics, robotics, bioengineering, software, & A.I. bioengineered radiation/drought resistant food.
 - 10,000+ Users. 20,000+ students impacted. 16+ subsidiaries/separate initiatives. \$225k in prizes. Featured interviews with UN Secretary General Candidate 2021, partnered with Fiveable, and featured on CNBC.
- Mechanical Engineering Research Intern @ ENGI E4900 Graduate Research Program (Columbia University)(2020-21)
 - Developed passive solar panel trackers with 60% increased efficacy. Utilized CAD/FEA to analyze and design its mechanical systems and gearbox.
- Student Researcher @Columbia University (2018-21)
 - NanoCrystal Technology Research (*Unpublished*). Using MnOx-CeO2 nanocrystals to filtrate carcinogens and toxins like Aldehydes found in E-Cigs/Vaporizers.
 - N95 Mask Reuse Research (*published*) 20k+ reads/downloads. Worked with International Rescue Committee to develop disinfection systems for 90k refugees in Thailand.
- Product Director/Board Member/Junior Researcher @ [Nexus Aurora](#) (2020-21)
 - Mars City-State Design Competition – **Mars Society/NASA**. Designed heavy ISRU industrial machinery, orbital launch system, and presented designs, CAD models, and experiments to engineers at NASA. Won 1st place and received \$10,000 in funding.
 - Orbital Can Station (OCS) @ **International Astronautical Congress**. Artificial Gravity & Satellite architecture.
- President + Mechanical Captain + Alumni Advisor @ FIRST Robotics Competition, [Cyborgs 6969](#) (2016-21)
 - 4,000+ Hours in Mechanical Engineering, Robotics, CAD, Machining (metal shop), Electronics, and Design.
 - Managed \$30,000+ funding/sponsors, public relations, partnerships, and community service events.

PUBLICATION & PRESENTATION

- Yan, R., S. Chillrud, D. Magadini, and B. Yan: Developing home-disinfection and filtration efficiency improvement methods for N95 respirators and surgical facial masks: stretching supplies and better protection during the ongoing COVID-19 Pandemic. *Journal of the International Society for Respiratory Protection* 37(1): 19-35 (2020). <https://www.isrp.com/the-isrp-journal/journal-public-abstracts/1143-vol-37-no-1-2020-pp-19-35-yan/file>
- Elizabeth, M., Kegel, K., Kim, D., Lawlor, O., Manelski, H., Rinfret, O., Ross, S., Rough, C., and Yan, R: Nexus Aurora, and our Mars City-State Design. *23rd Annual International Mars Society Convention*. October 15-18, 2020. CA, USA.
- Yan, R and Aadhiraj, N: How quantum layering can enhance the algorithms shaping the healthcare industry. *Global STEM Alliance Summit by New York Academy of Science*. July 20-21, 2021. New York, USA.
- Yan, R and Jha, S: How student-driven opportunity sharing can change the way we start our careers. *International Career Development Conference (DECA)*. April 23-26, 2020. Atlanta, Georgia, USA.
- Yan, R and Jha, S: Nexus, an education-driven, career development databasing and sharing platform. *International Career Development Conference (DECA)*. April 17-20, 2021. Anaheim, California, USA.