

D EXTRACURRICULAR ACTIVITIES AND STUDENT ESSAY OF Wang, William**ACTIVITIES:** List the activities/volunteer service **most significant** to you.

Activity/volunteer service	Positions held, honors won, or letters earned	Hours/Weeks	Grade Level(s)
Medical Research	Researcher; First Author of medical paper published in Nature	20/40	11-12
CWRU Summer Research Program	Student; Completed research on real-world effects of COVID-19	35/15	9-11
High School Varsity Wrestling Team	Varsity 190-215 Heavyweight; Competed State Varsity Sectionals	12/15	11-12
Computer/Mathematical Programmin	Earned certificates from 10 university level courses by EDX	9/35	9-12
Greater Cleveland's Youth Alliance	Vice-President	6/20	10-12
Art	Secretary/Treasury of school Art Club; Assistant Art Teacher	4/36	11-12

OTHER HONORS OR AWARDS: List one-time honors or awards received and academic year, e.g., Academic Gold Medal, grade 10

Rise Finalist,11;Coolidge Scholar,11;Newsdepth A+,11;NEOSEF Second Place,11;AMIA Presenter,11;Cleveland.com Top Mind,11

EMPLOYMENT: List paid employment held, academic year, and time commitment.

Mover/Wood-cutter/Landscaper, grade 9-12, 6 hours/week during the summer

COLLEGE MAJOR (if known): Public Health **INTENDED CAREER** (if known): Public Policy Researcher, Analyst, or Consultant**STUDENT ESSAY:** To help the reviewers get to know you, describe an experience you have had, a person who has influenced you, or an obstacle you have overcome. Explain why this is meaningful to you. Use your own words and limit your response to the space below.

According to the Global Risks Report 2024 by World Economics, misinformation and disinformation emerge as the most severe global risk foreseen in the next two years, followed by a warming planet, conflict, and economic uncertainty. Artificial Intelligence (AI) technologies are reshaping society, medicine & healthcare, popular culture, policy, and economics in ways both electrifying and disturbing. Generative AI like ChatGPT reached mass adoption in record time and offers many promises in modern aspects; however, they carry a significant risk for the mass generation of almost infinite health disinformation. I.e. the COVID-19 pandemic devastated the nation and caused over 1.2 million deaths in the U.S. Pivotaly however, estimates found that more than 200,000 deaths were avoidable - attributed to anti-vaccine disinformation spouted by digital/social media, and confusion over CDC guidelines. And because, we lack a single-payer national health insurance system, the data on the COVID-19 pandemic was often too late to inform health policy. E.g. in May 2021, the CDC said "Fully vaccinated people can resume activities without wearing a mask or physically distancing". In October that year, the former secretary of state Colin Powell, passed away from COVID-19; though he was fully vaccinated, his immune system had been weakened from multiple myeloma, a blood cancer that compromises the body's ability to fight infections. From 2020-2021, 17-18 million patients were living with cancer in the U.S. It is the responsibility of the nation's people nation to those who are most at risk and vulnerable, and I decided to make a change. To deliver scientific health information to cancer patients in time, I analyzed the electronic health records of 100 million patients from a nationwide medical database, determining the real-world risks and outcomes for patients with common forms of malignant cancer based on an index of COVID-19 vaccination. My study showed that cancer patients though fully vaccinated, had a significantly increased risk for COVID-19 breakthrough infections and significant risk of mortality and hospitalization - and recommended patients to have enhanced caution and mitigation, including masking and booster vaccines, especially for those undergoing active cancer therapy. The study was published in JAMA Oncology in April 2022 and featured by various news outlets. Similarly, another unprecedented wave in the medical field was the medication Semaglutide (the active component of Ozempic and Wegovy), appraised as the Scientific Breakthrough of the Year. Though it stands as a great advancement in the treatment of both Obesity and Type II diabetes, it also introduced a plethora of uncertainty, unknowns, and complexities - creating a window of vulnerability to misinformation. I began my research in July 2023 after growing concerns were raised after anecdotes of possible suicidal risk from patients prescribed Semaglutide - prompting an investigation by European Medical Agencies and the FDA. Suicide is a leading cause of death in the U.S. and the second leading cause for children ages 10-14; in 2021, there were 48,183 cases of death from suicide. Given that millions of patients take Semaglutide, it was imperative to gather comprehensive real-world data to assess the potential suicidal risk associated with Semaglutide. I was able to determine that there was no substantial evidence supporting an association between higher suicidal risk and Semaglutide, but the contrary - the results instead pointed to a significantly decreased suicidal risk. 6 days following the publication in Nature Medicine, the FDA and EMA officially removed the association of suicide risk with Semaglutide, with the study cited as the main contribution to this decision. These experiences demonstrate the immense potential of advanced analytical tools such as AI technology, to provide real-world scientific evidence to guide public health policy. But, it also illustrated how pivotal it is to take initiative, to protect the health and livelihoods of other people, and to change the future.

M 2025 NATIONAL MERIT® SCHOLARSHIP APPLICATION

Semifinalist ID #: 25-15584

Selection Unit #: 36-0534

Name: Wang, William
Address: 5 Pepper-ridge Rd
Pepper-Pike, OH 44124
UNITED STATES

PSAT/NMSQT Scores
RW M Sel. Index
720 750 219

High School Code: 36/1332
High School Name and Address:
ORANGE HIGH SCHOOL
32000 CHAGRIN BLVD
CLEVELAND, OH 44124
UNITED STATES

E TO BE COMPLETED BY THE SEMIFINALIST

Wang, William Name (last, first, middle initial) 5 Pepper-ridge Rd Home mailing address (number & street and/or P.O. Box) Pepper-Pike OH 44124 USA City State Zip Code Country				02/04/07 Birth Date (mm/dd/yy) 650-283-7592 650-283-7592 Home Phone # Cell Phone # (optional) bill.pipi.wang@gmail.com E-mail	
I am living with (check all that apply): <input checked="" type="checkbox"/> Father <input type="checkbox"/> Stepfather <input checked="" type="checkbox"/> Mother <input type="checkbox"/> Stepmother <input checked="" type="checkbox"/> Guardian (give name and relationship): Quangqiu Wang, Father				List the ages of your siblings: 21,19	
High school graduation date Month Year 06 / 2025		College entrance date Month Year 09 / 2025		Are you now enrolled in college? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, full-time <input type="checkbox"/> Yes, part-time If full-time: <input type="checkbox"/> Dual Enrolled <input type="checkbox"/> Early Entrant	
First-choice college: Case Western Reserve University See page 3 of Requirements and Instructions document. Cleveland OH City State I will live: <input checked="" type="checkbox"/> on campus <input type="checkbox"/> at home				College major: Public Health code #: 631 Intended career: Public Policy Researcher, An code #: 883 See codes at www.nationalmerit.org/resources	

PARENTAL EMPLOYMENT: Most corporate-sponsored Merit Scholarship® awards are specified for Finalists who are children of employees of the sponsor organization. Give the **exact** name of the employing company or organization; do not abbreviate. If the parent is retired or deceased, give the name of the last employer.

<input type="checkbox"/> Employed <input checked="" type="checkbox"/> Self-employed <input type="checkbox"/> Not employed <input type="checkbox"/> Retired <input type="checkbox"/> Deceased	Wang, Mr Quangqiu Name (last, first, middle initial) Occupation or title Exact name of employing company or organization Pepper Pike Company address (city and state)	<input type="checkbox"/> Employed <input type="checkbox"/> Self-employed <input type="checkbox"/> Not employed <input type="checkbox"/> Retired <input type="checkbox"/> Deceased	 Name (last, first, middle initial) Occupation or title Exact name of employing company or organization Company address (city and state)
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Supply Information about the employment of **OTHER PARENT** in the space below. (Stepparent, guardian, etc.)

<input type="checkbox"/> Employed <input type="checkbox"/> Self-employed <input type="checkbox"/> Not employed <input type="checkbox"/> Retired <input type="checkbox"/> Deceased	 Name (last, first, middle initial) Occupation or title Exact name of employing company or organization Company address (city and state)	<input type="checkbox"/> Employed <input type="checkbox"/> Self-employed <input type="checkbox"/> Not employed <input type="checkbox"/> Retired <input type="checkbox"/> Deceased	 Name (last, first, middle initial) Occupation or title Exact name of employing company or organization Company address (city and state)
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