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 Programming	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, mis/dis-information is emerging as the most severe global risk foreseen in the next two years. Artificial Intelligence (AI) technologies are rapidly reshaping society, medicine, healthcare, popular culture, policy, and economics in ways both electrifying and disturbing. Generative AI like ChatGPT has reached mass adoption in record time, offering many promises in modern aspects; however, they carry a significant risk for the mass generation of an almost infinite surge of health disinformation, particularly in a world that is rapidly beginning to shift to a digital medium.

The COVID-19 pandemic devastated the nation, causing over 1.2 million deaths, and irreparably affecting the lives of countless people. Pivotally however, estimates found that more than 200,000 deaths could have been avoided - attributed to anti-vaccine disinformation expounded by social media. This stemmed from confusion and irresolution on CDC guidelines, with data on the COVID-19 pandemic failing to effectively inform public policy: in May 2021, the CDC stated "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. It is my responsibility to protect the health of those who are most at risk and vulnerable. To deliver the needed health information in time, I analyzed the electronic health records of 100 million patients from a nationwide medical database, determining the real-world effects of COVID-19 vaccination for patients with 12 common forms of malignant cancer. My study showed that though cancer patients had been fully vaccinated, many still had a significantly increased risk for COVID-19 breakthrough infections and significant risk of mortality and hospitalization, especially for patients undergoing active cancer care. The study was published in JAMA Oncology in April 2022 and featured in various news outlets.

In 2023, Semaglutide (Ozempic/Wegovy) was appraised as the Scientific Breakthrough of the Year. And though it stands as an unprecedented advancement in the medical 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 investigation by both the European Medical Agencies and the FDA. Suicide is a leading cause of death in the U.S. and the second leading cause ages 10-14; in 2021, there were 48,183 cases of death from suicide alone. Given that millions of patients take Semaglutide, it was imperative to gather comprehensive real-world data to assess the potential suicidal risk. The findings from my research determined that there was no substantial evidence supporting an association between suicidal risk and Semaglutide. On the contrary, the results revealed semaglutide was associated with a significant 49% to 73% reduction in suicidal risk. The findings were published in Nature Medicine on January 5, 2024. On January 11, the FDA cleared the suicide risk warning for Wegovy and Ozempic. On April 12, 2024, the European Medicine Agency would also clear the warning of suicide risk of Wegovy and Ozempic, both citing the study as a significant contributor to their decisions.

Though AI technology is still being used to enable rampant misinformation, these experiences demonstrate the immense potential of advanced AI analytical tools to provide real-world scientific evidence to effectively, efficiently, and ethically guide public health policy. But above all, it also illustrated how pivotal it was to take initiative, to protect the health and livelihoods of patients and their families.

M̄ 2025 NATIONAL MERIT® SCHOLARSHIP APPLICATION

Semifinalist ID #: 25-15584   Selection Unit #: 36-0534

Name:	Wang, William	PSAT/NMSQT Scores	High School Code: 36/1332

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

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

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):
- [x] Father
- [x] Mother
- [x] Guardian (give name and relationship):
- [ ] Stepfather
- [ ] Stepmother

Quangqiu Wang, Father

List the ages of your siblings:
21,19

High school graduation date: Month 06 / Year 2025
College entrance date: Month 09 / Year 2025

Are you now enrolled in college? [x] No   [ ] Yes, full-time   [ ] Yes, part-time
If full-time: [ ] Dual Enrolled   [ ] Early Entrant

First-choice college: Case Western Reserve University
See **page 3** of *Requirements and Instructions* document.

Cleveland   OH
City   State

I will live: [x] on campus   [ ] 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.

- [ ] Employed
- [x] Self-employed
- [ ] Not employed
- [ ] Retired
- [ ] 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)

- [ ] Employed
- [ ] Self-employed
- [ ] Not employed
- [ ] Retired
- [ ] Deceased

Name (last, first, middle initial)

Occupation or title

Exact name of employing company or organization

Company address (city and state)

Supply Information about the employment of **OTHER PARENT** in the space below. (Stepparent, guardian, etc.)

- [ ] Employed
- [ ] Self-employed
- [ ] Not employed
- [ ] Retired
- [ ] Deceased

Name (last, first, middle initial)

Occupation or title

Exact name of employing company or organization

Company address (city and state)

- [ ] Employed
- [ ] Self-employed
- [ ] Not employed
- [ ] Retired
- [ ] Deceased

Name (last, first, middle initial)

Occupation or title

Exact name of employing company or organization

Company address (city and state)

CI	% Col	Rank	Type	Maj	Car	Col #	
14	9		1	631	883	1105	