

Education

HARVARD UNIVERSITY

A.B. Neurobiology and Global Health & Health Policy Candidate

GPA: 3.7

Cambridge, MA

May 2027

Relative Coursework: Statistics; Organic Chemistry I & II & Biochemistry; Applied Physics I & II; The Politics of Medicine and Health in the U.S.; Cell Biology; Epidemiology, Pharmaceuticals, US Health Reform; Principles of Cell Physiology; Neurobiology of Behavior; Life Sciences: Chemistry, Molecular & Cell Biology; Genetics, Genomics, and Evolution; Foundations and Frontiers of Modern Chemistry: A Molecular & Global Perspective; Behavioral & Public Policy; Frontiers in Biomedicine; German

Christ Episcopal School

GPA 4.33/4.33 ACT: 35

Covington, LA

May 2023

Cameron Impact Scholar, Coca-Cola Semifinalist Scholar, Chevron Scholar, American Legion Auxiliary Girls State, Daughters of American Revolution Good Citizen Award, Service Award, Student of the Year, Burger King Scholar, Academic of Excellence Awards

Endocrinology & Neurobiology Research on Chronic Granulomatous Mastitis (1st Author Publication), Student Government President, Biomedical Club President, 6x Louisiana Cross Country State Champion, State Pole Vault Runner-up, Tests of Engineering Aptitude, Mathematics, and Science Competition State Runner-Up (Captain), Summer Camp Counselor (4 years), Mu Alpha Theta President, Mathematics and Science Tutor, Brooke It Forward Drive

Experience

Tulane School of Medicine Internship

Biomedical Engineer Research Intern

New Orleans, LA

April 2020-Present

- Annotate hundreds of high-resolution prostate histological images for marginalization of tumor environment, enabling the system to accurately highlight cancer at a cellular level and generate highly detailed 3D tumor maps
- Guide the machine during clinical trial cases of 300+ patients, observing in the operating room and using the magic scan to scan the prostate for tumor margins
- Project was awarded \$25 million as part of White House Moonshot initiative for the MAGIC-SCAN Project
- Work daily with biomedical engineers, Pathologists, Computer Scientists, Imaging Engineers, Mathematicians, Electrical & Computer Engineers, Physicians, Ph.D. students
- Partook in Dr. Brown's original project to immerse digital pathology into the clinical setting through in-depth analysis of machine learning and the Tulane University course: Product & Experimental Design (BMEN 2310)

Harvard CrimsonEMS

Community Outreach Officer: Advocacy, CPR Instructor, and NREMT

Cambridge, MA

August 2023 - Present

- Interviewed & accepted with the highest rating and as the first first-year in fall program history to engage in semester-long EMT course with 22 Harvard & MIT students
- Provide emergency medical services to Harvard students and affiliates as a nationally certified Emergency Medical Technician (38.25 hours)
- Participate in ambulance ride-alongs with ProEMS in Boston to gain hands-on clinical experience in emergency medical care.

Boston Children's Newborn Medicine Internship

Research Intern

Boston, MA

May 2024-November 2024

- Summer & Fall Intern with Dr. Sarah Morton, MD, analyzing placental biomarkers, addressing a critical gap in neonatal data following a clinical trial at Boston Children of neonates with known neurologic outcomes but lack placental data.
- Study aims to identify specific placental components influencing congenital heart disease and its impact on neurodevelopmental outcomes. A cohort of hundreds to thousands of neonates will be studied—standing as the largest of its kind with potential to improve neonatal health.

Health Disparities Think Tank

Research Fellow

Palo Alto, CA and Boston, MA

June 2024 - Present

- Authored a manuscript, pending publication, focusing on exploring solutions to disparities in access to palliative care among immigrants, in correlation to medicaid, post-cancer treatment
- Mentored by Dr. Su, M.D, Oncologist at University of Washington and Dr. Hantel, M.D., Oncologist at Harvard. Collaborated with Georgetown medical student, Harvard & Stanford graduate, as the youngest undergraduate on the team
- Presenting proposal and manuscript to stakeholders and Congress this year

Harvard Institute of Politics Health Policy Team

Policy Brief Researcher and Writer

Boston, MA

May 2024 - Present

- Researched and co-authored a 50-page policy brief on Massachusetts legalizing court-mandated out-patient treatment for SIMs individuals, processing through legislature with a particular focus on rural Massachusetts

Harvard Oncology Interest Group

President

Cambridge, MA

September 2024-Present

- Collaborate with Oncologists in Massachusetts to design and implement monthly cohort meetings, including speaker series, interactive workshops, and events tailored to oncology topics

Harvard Surgery Interest Group

Member

Boston, MA

October 2024 - Present

- Engage with Harvard Medical School physicians across various surgical specialties through interactive discussions and mentorship
- Observe live surgeries to develop a deeper understanding of operating room procedures and patient care
- Gain hands-on experience with fundamental surgical techniques, including suturing, knot-tying, and laparoscopic tools.

Harvard Mission:Brain

International Initiatives Team Member

International

April 2025-Present

- Spearheading an educational medical program for children in Africa and Southeastern Europe
- Collects unused, single-use surgical items (e.g., gloves, gowns, sutures) from MGH operating rooms to reduce medical waste and support global health efforts.
- Sorts, packages, and coordinates the shipment of neurosurgical supplies to hospitals in low-resource settings, such as Sierra Leone, improving access to essential surgical tools.

Harvard Crimson

Sports Column Writer

Cambridge, MA

September 2024-Present

Harvard-Radcliffe Varsity Lightweight Rowing

Division 1 Student-Athlete

Boston, MA

October 2024 - March 2024

- Committed to 20+ hours per week through 11 weekly practices, travel, and competing in regattas across New England while simultaneously maintaining a full course load; partook in training trips during winter break
- Invited to walk-on to the Varsity team, following an intensive try-out process. Medically retired

Senior Thesis

Research Intern

New Orleans, LA

August 2022-May 2023

- Defended thesis on the analysis of the design process in Metal-on-Metal Hip implants that caused cobalt toxicity, as it relates to the 510(k) FDA pathway and cobalt-chromium concentration that correlates to vision loss

Leadership

Harvard Undergraduate Pediatric Cancer Buddies

President

Boston, MA

August 2023 - Present

- Serve as a friend to the children at Ronald McDonald House and Christopher's Haven at least twice a week through activities, conversations, and free academic support for pediatric cancer patients and siblings during weekly visits
- Lead all weekly visits to families with children undergoing cancer, brain, or cardiac surgery, with a goal for long-term relationships (87 hr)
- Lead and coordinate all hospitality home visits, accompany patient and family on an activity in family, and match other Buddies to families, ensuring seamless support while facing health challenges
- As Activity Director (August 2023 - December 2024), designed all activities according to age groups, preferences, and abilities of the children at Ronald McDonald House according to their treatment plan

Pathoknowledge Program

Director, Co-Founder, and Social Media Designer

Virtual

August 2020 - Present

- 425+ high school students, 9 concluded programs, 38 countries represented, 25+ states represented; finalizing 2025 summer program
- Founded and lead a virtual medical program with guidance of three Medical Residents
- Increase international & national high school students' knowledge through researching literature & studying case studies to craft presentations, presented in weekly sessions.
- Collaborate with physicians, physician assistants, biomedical engineers, etc. throughout the world to speak with the program

Harvard CrimsonEMS

Community Outreach Officer: Advocacy and CPR Instructor

Cambridge, MA

April 2024 - Present

- Lead & instruct CPR and First Aid courses to professors, Harvard Homeless Shelter, guests of Harvard, students, etc
- Spearhead legislative advocacy through the CPR High School Ambassador Program, mentoring over 50 high school students across Massachusetts to advocate for Bill H.475, which seeks to make CPR certification a high school graduation requirement.
- Facilitate weekly meetings to guide students in leading CPR training within their schools and communities while collaborating with state senators and legislators to enhance local health preparedness.
- Advocacy efforts have contributed to promising support for Bill H.475, as indicated by feedback from the American Heart Association and Legislators.

Volunteer Experience

Breast Cancer Program

President

Boston, MA

February 2025 - Present

- Lead a student team in designing, sewing, and donating post-surgical underarm pillows to breast cancer patients across Boston hospitals
- Develop educational outreach campaigns promoting breast health awareness, early detection, and self-examination practices.

St. Tammany Cancer Center

Clinical Volunteer

Covington, LA
June 2025 - Present

- Provide compassionate support to patients in infusion rooms, engaging in conversations, reading aloud, and offering emotional comfort during chemotherapy sessions.
- Assist medical staff, including doctors, nurses, and clinic professionals, with day-to-day tasks to enhance patient care and clinic efficiency.
- Support patients experiencing hair loss due to chemotherapy by guiding them in selecting wigs that suited their preferences and needs.
- Help breast cancer patients find well-fitting prosthetic bras, offering sensitivity and care during the process.
- Foster a welcoming and empathetic environment to improve the overall patient experience and provide emotional and practical assistance.

Harvard Camp Kesem

Director of Fundraising & Volunteer Camp Counselor

Boston, MA
March 2024 - Present

- Camp Kesem is a summer camp supporting children through and beyond their parent's cancer
- Undergo regular training and spearhead fundraising of \$40,000+ in preparation for serving as a volunteer counselor and friend supporting over 60 children during the summer, offering them a time of Kesem ("magic" in Hebrew), fun, and laughter

St. Tammany Parish Hospital Parent Center

Volunteer

Covington, LA
June 2024-August 2024

- Co-taught weekly class for court-mandated parents, supporting efforts towards reunification with their child(ren) through educational resources
- Co-facilitate a comprehensive weekly program for expecting and current mothers, focusing on breastfeeding, nutrition, and postpartum care
- Authored multiple educational articles published in various St. Tammany magazines, including the hospital magazine. "Nurturing Newborns in the South" "The importance of swim lessons when living in the Bayou", and "Staying safe during the hurricane season"
- Oversaw monthly CPR instruction sessions for infants to ensure adherence to safety protocols and instructional standards.
- Led multiple weekly developmental group activities for children aged 0-4 and their parents, emphasizing social skills, sharing behaviors, and sibling communication through the "BabyChat" initiative.
- Co-taught safe sitter class for young babysitters in the St. Tammany Parish, including CPR certification

NICU baskets

Volunteer

Louisiana
June 2024-Present

- Initiated and coordinated the donation of NICU baskets, containing essential items such as diapers, clothes, and other necessities, to hospitals in the Cajun and Cancer Alley community, supporting parents with children in the NICU.

The Sweet Sisters Bakery

Lead Baker and Founder

Louisiana
August 2019 - Present

- Regulate & manage funds to be donated directly to St. Jude Children's Research Hospital and Usher Syndrome Type 1C research
- Efficiently serve as the lead baker to fulfill all orders in the greater New Orleans Region
- Create social media content designed to drive sales and increase engagement

Publications

- Cheryl Tolomeo, Jessica Zhuo, Anissa Kurani, **Meaghan Burke**, Stephanie Wang, Alice Feng, Christopher Su, MD, Edward Christopher Dee, MD (2024) Improving Palliative Cancer Care for Immigrants in the United States. Pending publication in **Journal of Clinical Oncology**
- **Burke, Meaghan** (2020) Abnormal Prolactin Levels Possibly Cause Chronic Granulomatous Mastitis to Individuals who have not Breastfed. Published in International Research Made Simple Journal

Awards

Cameron Impact Scholar

Bryan Cameron Education Foundation

December 2022-Present

- Impact & merit-based award covering full-cost of tuition, course-related expenses, and books for my 4-year college education
- Mentor incoming scholars, especially those from Southern states, rural areas, or with an interest in medicine
- Selected by Foundation & Scholars out of 135 scholars to serve as a mentor to an incoming Scholar

Harvard Technology Review Fellowship

2023 Fellow

Cambridge, MA
August 2023

- Selected as a Summer Fellow and published ["The Physician's Touch vs. The Touch of Verification"](#)

Striving for Excellence in EMS

National Collegiate Emergency Medical Services Foundation (NCEMSF)

Cambridge, MA
August 2023 - May 2024

Skills

Laboratory: Micropipetting, Tissue Tumor Annotations, Titrations, Manipulate DNA, Analyze peptides, Use of PCR machines

Technical: R coding, Health Policy writing, Graphic Design, Excel

Interests: Half Marathon Runner, Baking (Bakery Owner), Medical Museums