#### **Quick Key:**

The following fields aim to help students quickly review programs, based upon the information posted in program description, only. Note, this document is only a guide as many programs may not have expressly listed specific information.

## AAMC: Summer Enrichment and Pipeline Programs across US, searchable database

#### Searchable Database

Summer enrichment and pipeline program database to help students locate summer enrichment programs. Multiple filters can be applied to search for programs by State, Region, Focus, Education level, Length of program and Institutions. https://systems.aamc.org/summerprograms/

## CDC, Summer & Year round opportunities, searchable database

#### Searchable Database

Public Health: Varied Fellowships, Internships and Learning Opportunities <a href="https://www.cdc.gov/fellowships/short-term.html?Sort=title%3A%3Aasc&Educational%20Level=Undergraduate%20Students">https://www.cdc.gov/fellowships/short-term.html?Sort=title%3A%3Aasc&Educational%20Level=Undergraduate%20Students</a>

## **GREAT, Summer Undergraduate Research Opportunities, AAMC database**

#### Searchable Database

In 2004, a MD-PhD Section was established to promote the development, growth and nurturing of physician-scientist training programs by representing the interest of MDPhD programs. In 2008, a Postdoctorate Leaders Section was established to support and enhance the quality of postdoctoral research training and professional development for postdoctoral appointees by providing a forum for institutional leaders of postdoctoral education and training.

https://www.aamc.org/career-development/affinity-groups/great/summer-undergrad-research-programs

## **National Science Foundation, multiple opportunities**

#### Searchable Database

Biological Sciences APPLICATIONS: Students must contact the individual site or program to apply. NSF does not have application materials and does not select student participants.

ELIGIBILITY: Individual sites may have additional eligibility requirements (e.g., number of undergraduate years completed). Undergraduate student participants supported with NSF funds must be citizens or permanent residents of the United States or its possessions. High school graduates who have not yet enrolled, and students who have already received their bachelor's degrees, are not eligible. https://www.nsf.gov/crssprgm/reu/list\_result.jsp?unitid=5047

## Associated Colleges of the MidWest Graduate School Exploration Fellowship (GSEF)

The Graduate School Exploration Fellowship (GSEF) funds fellowships that provide undergraduates at ACM colleges with a robust set of mentoring, career development, and experiential research opportunities beginning in the summer between their sophomore and junior year.

All qualified sophomores from underrepresented groups are encouraged to apply for the GSEF. Applicants should indicate a strong interest in pursuing a doctoral degree in the humanities or humanistic social sciences, or a terminal master's degree in the arts, and/or a genuine interest in academic research and/or teaching at the college level as a career. Please note that this does NOT include programs leading to professional degrees, e.g. medical school (M.D.), law school (J.D.), or business school (MBA). https://acm.edu/students/graduate-school-exploration-fellowship-gsef/

#### **BIG Ten Academic Alliance, Summer Research Opportunities Program (SROP)**

The Summer Research Opportunities Program (SROP) is a gateway to graduate education at Big Ten Academic Alliance universities. The goal of the program is to increase the number of underrepresented students who pursue graduate study and research careers. SROP helps prepare undergraduates for graduate study through intensive research experiences with faculty mentors and enrichment activities. Now in its 37th year, SROP celebrates the achievements of its alumni. To date, 610 program alumni have earned a Ph.D. degree and are now preparing the next generation of SROP scholars as mentors and teachers. Thousands of others have completed graduate training and are pursuing successful careers in government, business, and non-profit agencies.

https://btaa.org/resources-for/students/srop/overview

#### Caltech, Amgen Scholars

The Amgen Scholars Program is a national program aimed at increasing research opportunities for students committed to pursuing careers in the sciences. At Caltech, we provide visiting students the opportunity to conduct research in biology, chemistry, and bio-technical related fields under the guidance of some of the world's leading academic scientists. Research projects, along with scientific seminars, workshops, and networking events, prepare participants to pursue a Ph.D. or the joint M.D./Ph.D. degree and research careers in the sciences and biotechnology.

https://sfp.caltech.edu/undergraduate-research/programs/amgen scholars

#### Caltech, WAVE Fellows

The WAVE Fellows program supports this goal by increasing visibility and accessibility to Caltech's PhD programs to undergraduates in STEM fields who are seriously considering attending graduate school. WAVE Fellows is a 10-week undergraduate research program that provides robust programming in the areas of academic and professional development.

Applicants will identify several possible mentors with whom they are interested in working. Once accepted, Fellows will work with their mentor to define and develop a research project. Fellows will carry out the work over a 10-week period during the summer and submit two interim reports, a research abstract, and final paper. At the conclusion of the program, students give an oral or poster presentation at one of several Seminar Days, symposia modeled on a professional technical meeting.

https://sfp.caltech.edu/undergraduate-research/programs/wavefellows

## **ChicagoCHEC Research Fellows**

The ChicagoCHEC Fellows program is a comprehensive learning experience for undergraduate and postbaccalaureate students at Northeastern Illinois University, University of Illinois at Chicago, Northwestern University, the City Colleges of Chicago, and other Community/ Junior Colleges in the Chicago metropolitan area who are planning to apply to graduate or medical school. This program is focused on the development of academic, technical, and professional skills in preparation for careers in social, behavioral, and biomedical research and in healthcare. ChicagoCHEC Fellows will spend the summer in seminars, workshops, and research lectures learning from leading researchers. This program seeks outstanding undergraduate and postbaccalaureate students with an interest in careers in health and health care who: (1) intend to apply to graduate or medical school; and (2) can bring diverse perspectives and experiences to advance cancer health equity.

https://chicagochec.org/fellows/

**Chicago EYES (Educators and Youth Enjoy Science) on Cancer** 

Chicago EYES on Cancer is a cancer research training program for high school and college students interested in careers in biomedicine. The program also welcomes secondary science educators. For two consecutive summers, participants work full-time in the laboratories of established cancer researchers at the University. Rigorous research training is complemented with a cancer-based lecture series, skill-building workshops, and a network of faculty and peer mentors dedicated to participants' success. The program culminates in a research symposium to showcase participants' work across basic, translational, clinical, and population-based areas of cancer research. https://www.uchicagomedicine.org/cancer/education-outreach/student-education/high-school-undergraduate/eyes

#### **Columbia University Summer Public Health Scholars Program (SPHSP)**

The SPHSP is designed for undergraduate students and its goal is to increase interest in and knowledge of public health and biomedical science careers. SPHSP is a partnership of the Columbia University Vagelos College of Physicians and Surgeons, College of Dental Medicine, School of Nursing, and the Mailman School of Public Health. The program is designed for undergraduates entering their junior or senior year and recent baccalaureate degree students who are undecided about their career goals. This is a rigorous program that includes Public Health coursework at Columbia University; hands-on field experience and immersion in a diverse, economically disadvantaged urban environment; seminars and lectures with public health leaders; and mentoring by faculty members, ensuring students' exposure to the breadth and importance of public health as a career option. This is a CDC funded program.

https://www.publichealth.columbia.edu/academics/special-programs/pathway-programs/summer-public-health-scholars-program

#### Columbia University, New York. SHPEP, Summer Health Professions Education Program

The SHPEP is a free six-week summer enrichment and residential program for first- and second-year college students interested in the health professions. SHPEP at Columbia University Irving Medical Center provides students interested in pursuing a career within the health professions with a well-defined, integrated approach to learning, focusing on the core science curriculum needed to apply to health professions schools for medicine, dentistry, nursing, public health, occupational therapy, physical therapy, and nutrition. Students will engage in intense coursework, labs, and career development courses during the six weeks of the program while participating in practical experiences and seminars. Program applicants must be a U.S. citizen, a Permanent Resident, or an individual granted deferred action for childhood arrivals (DACA) status by the U.S. Citizenship and Immigration Services.

https://www.vagelos.columbia.edu/education/academic-programs/additional-educational-opportunities/summer-youth-programs/college -post-baccalaureate/summer-health-professions-education-program-shpep

Fred Hutch, Summer Undergraduate Research Program

The Summer Undergraduate Research Program (SURP) is an intensive, nine-week internship for undergraduates entering the summer before their final year, semester, or quarter of study. It's designed to provide research experience and mentorship for students interested in biomedical research. Under the guidance of a faculty mentor, interns will complete an independent research project and present their findings at a competitive poster session. In addition to completing a mentored research project, interns participate in professional development workshops designed to facilitate preparation of competitive applications to graduate/medical school. https://www.fredhutch.org/en/education-training/undergraduate-students/summer-undergraduate-research-program.html

#### Four Directions Summer Research Program (FDSRP)

The Four Directions Summer Research Program (FDSRP) is a unique summer research opportunity at Harvard Medical School (HMS) and Brigham and Women's Hospital (BWH) for undergraduate rising sophomores, juniors and seniors with a commitment to the health of Native American communities. Students engage in a basic science research project under the direction of a Harvard Medical School Faculty Mentor. Additional activities include clinical shadowing, career development seminars, weekly Talking Circles, networking events and more. Upon completion of the program, students leave BWH and HMS with new skills, experiences and knowledge that can be used to empower themselves, their communities and future generations of Native peoples from all Four Directions. https://cdi.brighamandwomens.org/four-directions-summer-research-program/

#### **Georgetown University Academy for Research, Clinical, and Health Equity Scholarship (ARCHES)**

The ARCHES program is a six-week residential summer enrichment program for pre-health students who are currently enrolled in US accredited colleges and universities. Each year, ten undergraduate fellows are selected to participate in the program which offers research engagement, clinical exposure activities, and a range of opportunities to explore health equity challenges that are prominent across the District of Columbia. The program experience provides concentrated support that is geared towards preparing program fellows for medical school and other health professions related graduate level programs. International students are eligible if they have an F1 or J1 visa. <a href="https://som.georgetown.edu/diversityequityandinclusion/guarches/">https://som.georgetown.edu/diversityequityandinclusion/guarches/</a>

#### NAAHP, Summer Opportunities for Pre- Health Students (List of opportunities)

Summer opportunities for Pre-Health Students.

https://www.naahp.org/public-resources/student-resources/student-announcements/student-opportunities

## NIDA, National Institute on Drug Abuse Summer Research, multiple opportunities

The National Institute on Drug Abuse (NIDA) Summer Research Internship Program introduces undergraduate students aged 18 years and older to the field of substance use and addiction. Students participate in research internships by working with leading NIDA scientists at universities across the United States for eight weeks during the summer. The internship may include laboratory experiments, data collection, data analysis, formal courses, participation in lab meetings, patient interviews, manuscript preparation, and literature reviews. In addition, each intern will have an opportunity to deliver a brief presentation on their research project at the end of the internship. Individuals who have already participated in the NIDA Summer Research Internship Program are no longer eligible to apply. https://nida.nih.gov/about-nida/organization/offices/office-nida-director-od/office-research-training-diversity-disparities-ortdd/office-diversity-health-disparities-odhd/nida-summer-research-internship-program

# Northwestern University Robert H. Lurie Comprehensive Cancer Center, Undergraduate Summer Research Internships

We invite undergraduate students interested in biomedical and health sciences to participate in leading-edge cancer research and career exploration at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University. Participants work full-time (35-40 hours/week) under the mentorship of top cancer researchers in state-of-the-art laboratories and research facilities help to advance novel research projects in cell and molecular biology, cancer immunology, metabolism, clinical investigation, developmental therapeutics, genomics, population science, health disparities, bioinformatics and other focus areas. Immersive research training is complemented by faculty lectures, skills workshops and career development activities. Students will learn key principles of cancer biology and biomedical investigation, gain hands-on research experience, explore possible career paths, receive career guidance and individual mentoring, and develop a foundational community of multidisciplinary faculty, researchers, students and colleagues at Northwestern. Undergraduate students may participate in one of two cancer research internships at the Lurie Cancer Center:

- ACS-DICR American Cancer Society Diversity in Cancer Research Internship
- NU-CURE Northwestern University Cancer-focused Undergraduate Research Experience
  Both programs aim to support diverse, committed, innovative future leaders in cancer research whose efforts will improve the lives of cancer patients, their families, and the larger community.

https://www.cancer.northwestern.edu/research/education-training/summer-research/cure.html

#### **Northwestern University Pre-Med Internship Program**

The Northwestern Medicine Pre-Medicine Internship provides you with an opportunity to work at a premier academic medical center and to learn more about medical professions. Our interns participate in clinical observation, work on faculty-sponsored projects and engage in educational seminars from renowned leaders throughout our institution—all while exploring the great city of Chicago. This eight-week

paid program runs Monday through Thursday and is open to students who are enrolled in a four-year university and are interested in becoming a physician.

Students are matched with a clinical department and paired with both administrative and clinical mentors. Projects are clinically oriented and intended to challenge and build upon your current coursework as well as introduce you to new concepts in a real-world academic health care setting. At the end of the program, students will showcase their achievements at a poster session attended by organizational leaders.

https://www.nm.org/for-medical-professionals/i-am-a-student/northwestern-medicine-pre-med-internship-program

#### Northwestern, Office of Undergraduate Research, Summer Undergraduate Research Grants (SURGs)

SURGs provide a \$4,000 stipend to cover living expenses for eight weeks of full-time research on an independent academic or creative project, in all fields of study, under faculty supervision. Independent research grants center around a research question you seek to answer through the proposed methodology; you should be involved in multiple aspects of the research process including data collection, analysis, and synthesis of results (regardless of what methodology is used to answer the proposed question). Your project can be completed during any eight weeks of the summer term. SURGs may not be used for language study, established institutional research programs, or study-abroad programs. SURGs cannot be used to pay for internships or participation in volunteer activities. <a href="https://undergradresearch.northwestern.edu/funding/surg/">https://undergradresearch.northwestern.edu/funding/surg/</a>

#### Northwestern, Office of Undergraduate Research, Undergraduate Research Assistant Program (URAP)

The Undergraduate Research Assistant Program funds inexperienced students to work with faculty who are in need of assistance on their own research projects. In doing so, students who do not have sufficient research experience to design and carry out their own independent project gain first-hand mentored knowledge of research practices in their discipline, while faculty who would not otherwise be able to hire Research Assistants (RAs) get help with their own projects. Unlike our other grant programs, a URAP application has to be initiated by a faculty member. Faculty can apply with a particular student(s) in mind, or the Office of Undergraduate Research can assist in finding a student for them by running a search. Students in the program are paid \$16.00/hour. <a href="https://undergradresearch.northwestern.edu/urap/">https://undergradresearch.northwestern.edu/urap/</a>

## Northwestern, The Graduate School, Summer Research Opportunity Program [SROP]

The Summer Research Opportunity Program (SROP) is a seven-week competitive research experience hosted by Northwestern University for sophomores and juniors from colleges and universities across the United States. All fields of research at Northwestern are open to

SROP participants including the social sciences and humanities, physical sciences, chemical and biological sciences, technology, math and engineering fields.

https://www.tgs.northwestern.edu/diversity/diversity-recruitment/summer-research-opportunity-program/

## **Northwestern, Weinberg Summer Grants**

WCAS Summer Grant Awards from the Weinberg College Baker Program in Undergraduate Research are made to Weinberg College first-years, sophomores, and juniors and consist of a \$4000 stipend to cover research and living expenses for a continuous eight-week summer period. Students in other NU schools who propose research with Weinberg College faculty are not eligible for this award. Award priority is based on seniority and preference is given to rising seniors engaged in independent scholarly work, such as a senior thesis. In accepting this grant, you agree to abide by the eligibility requirements for the duration of the research grant period; violation of the requirements may result in retraction of the award.

Note: applicants typically must apply first for an <u>Undergraduate Research Grant (URG)</u> Summer Grant through the Provost's Office before applying for a Weinberg Summer grant. If the URG application is not funded, then one may apply for a WCAS Summer Research Grant. <a href="https://baker.northwestern.edu/grants/summer-grants.html#:~:text=WCAS%20Summer%20Grant%20Awards%20from,continuous%20eight%2Dweek%20summer%20period">https://baker.northwestern.edu/grants/summer-grants.html#:~:text=WCAS%20Summer%20Grant%20Awards%20from,continuous%20eight%2Dweek%20summer%20period</a>.

## **Oregon Health & Science University Summer Equity Research Program**

The OHSU Summer Equity Research Program offers an exciting opportunity for diverse undergraduate college students to spend eight weeks working on research projects alongside faculty, scientists, and graduate students. Equity interns can expect hands-on intensive research experience and weekly educational seminars hosted by faculty and scientific mentors. The program concludes with a scientific poster symposium open to all OHSU. You must be a U.S. citizen, permanent U.S. resident, or an eligible DACA student. You must have completed at least one undergraduate college year by the start date of the program and at least one course in the basic sciences and mathematics or statistics. Eligible students must come from either an underrepresented minority group; have experienced economic hardship; are first in your family to attend college; have experienced other economic, educational, ethnic/cultural, family circumstance hardships; or a student with disability.

https://www.ohsu.edu/center-for-diversity-inclusion/equity-research-program

Scripps Research, Summer Undergraduate Research Fellows (SURF)

Scripps Research's ten-week Summer Undergraduate Research Fellows (SURF) internship program offers students the opportunity to experience cutting-edge research in one of our 150+ laboratories while being mentored by our world-renowned faculty. The program is held on both our La Jolla, California campus. Unlink in traditional college classes where the course of study is entirely determined by the instructor, participants in this program identify their area of interest and are matched with a faculty mentor. Together the student and mentor craft a research project. The student will work on that project under the supervision of a graduate student, postdoc or another member of the lab for a few weeks, until the student is comfortable with the project. Then the student will be expected to work independently. Students are expected to work full-time in the laboratory and participate in weekly academic and research seminars. <a href="https://education.scripps.edu/undergraduate/summer-research/surf-program/">https://education.scripps.edu/undergraduate/summer-research/surf-program/</a>

#### Sens Research Foundation SRF Summer Scholars Program

The SRF Summer Scholars Program offers undergraduate students the opportunity to conduct biomedical research to combat diseases of aging, such as cancer, Alzheimer's, and Parkinson's Disease. Under the guidance of a scientific mentor, each Summer Scholar is responsible for his or her own research project in such areas as genetic engineering and stem cell research. The Summer Scholars Program emphasizes development of both laboratory and communication skills to develop well-rounded future scientists, healthcare professionals, and policy makers. Students participating in the program will hone their writing skills via periodic reports, which are designed to emulate text scientists commonly must produce. At the end of the summer, students will have the opportunity to put all of their newly developed communication skills into practice at a student symposium. The program learning objectives include:

- Planning and executing an independent research project
- Learning new technical skills
- Explaining scientific concepts to a non-scientific audience
- Submitting a simple grant proposal; and summarizing project results in a formal presentation

https://www.sens.org/education-opportunities/summer-scholars/

## <u>The Leadership Alliance, Summer Research – Early Identification Program (SR-EIP)</u>

SR-EIP is a fully paid summer internship that provides undergraduates with training and mentoring in the principles underlying the conduct of research and prepares them to pursue competitive applications to PhD or MD-PhD programs. SR-EIP offers closely mentored research experiences in the life and physical sciences, social and behavioral sciences, and the humanities at 20 research institutions across the country. SR-EIP Participants:

- Spend 8-10 weeks at a Leadership Alliance institution
- Receive a stipend, and travel and housing expenses from the research institution
- Work under the guidance of a faculty or research mentor

- Gain theoretical knowledge and practical training in academic research and scientific experimentation
- Make oral or poster presentations at the Leadership Alliance National Symposium
- Gain access to ongoing resources, mentoring, and professional networks to support your career path as a part of the Leadership Alliance community
- Receive professional development mentoring on applying to graduate programs and learn about research careers from alumni <a href="https://theleadershipalliance.org/summer-research-early-identification-program">https://theleadershipalliance.org/summer-research-early-identification-program</a>

#### **UCLA Amgen Scholars Program**

Students interested in summer research in any area of biomedical science, chemistry, bioengineering or chemical engineering are encouraged to apply. Students will be paired with a UCLA faculty mentor if the student does not already have a mentor at UCLA. Please visit the <a href="Amgen Faculty page">Amgen Faculty page</a> for information on over 100 potential mentors on the UCLA campus. If you are interested in another faculty that is not listed on the link above you can search for other faculty that you might be interested. In addition to working full time in the laboratory for 10 weeks, the program features:

- Weekly luncheons where students can meet and discuss science with invited faculty speakers
- Weekly workshops on such topics as applying to graduate school, how to write a personal statement and how to give a research presentation
- You will receive mentorship by UCLA Faculty Dr. Beth Lazazzera and Dr. Tama Hasson
- Biotechnology Symposium sponsored by the Amgen Corporation held in Los Angeles
- Access to UCLA campus facilities
- Social events to network with other summer researchers

https://sciences.ugresearch.ucla.edu/programs-and-scholarships/amgen-scholars/

## Stanford Medicine Canary Cancer Research Education Summer Training (Canary CREST Program)

The program offers a 10-week research experience in one of our state-of-the art labs. Each participant will be matched with a Faculty mentor who will help them craft a research project. Senior scientists and postdoctoral fellows will assist the Faculty in supervising and mentoring the students in the lab. The successful applicant can expect to work in a dynamic lab environment on challenging projects that involve a broad range of research techniques. Additionally, students will learn about the field of cancer early detection (from in vitro diagnostics to in vivo molecular imaging) through specially-designed short classroom sessions, as well as participate in professional development and career seminars. The program culminates with a Symposium, where students present individual posters on their research projects in front of their peers, faculty and lab mentors, and other Stanford scientists.

Students must be undergraduate students enrolled in two- or four-year colleges or universities. Students are expected to work at least 8 hours per day, 5 days per week in the lab for the duration of the 10-week period. Students are expected to attend all program activities, including orientation, seminars, and the poster symposium. Students must be U.S. citizens/permanent residents or currently enrolled Stanford University Undergraduates. Housing and travel assistance are available.

https://canarycenter.stanford.edu/canarycrest.html

# SHPEP, Summer Health Professions Education Program 4 Programs typically align with the NU calendar: Columbia, UCLA, University of Washington Western

SHPEP is a free summer enrichment program focused on improving access to information and resources for college students interested in the health professions. SHPEP's goal is to strengthen the academic proficiency and career development of students from economically or educationally disadvantaged backgrounds and those with demonstrated interest in issues affecting underserved populations to prepare them for a successful application and matriculation to health professions schools. SHPEP offers students a variety of academic and career experiences:

- Academic enrichment in the basic sciences and quantitative topics
- Learning and study skills development, including methods of individual and group learning
- Clinical exposure through small-group rotations in health care settings, simulation experiences, and seminars
- Career development sessions are directed toward exploring the health professions, the admissions process, and developing an education plan
- A financial literacy and planning workshop that informs students of financial principles and management strategies
- A health policy seminar series to expose scholars to current health policy issues, the policymaking process and analysis, health care financing, and the social determinants of health
- An introduction to interprofessional education that addresses effective collaboration across health professions <a href="https://www.shpep.org/about-the-program/program-overview/">https://www.shpep.org/about-the-program/program/our-schools/</a>

#### University of California at San Diego Summer Training Academy for Research Success (STARS)

STARS is an eight-week in-person mentored summer research program. Applicants must be 18 years of age, as well as U.S. Citizens or Permanent Residents. AB 540 or DACA students are eligible. Students will:

- Gain research experience with a UC San Diego faculty member
- Attend a GRE preparation course
- Attend graduate school preparation work-shops

Present at the annual UC San Diego Summer Research Conference

https://psychology.ucsd.edu/undergraduate-program/learning-opportunities/stars.html

## <u>University of California Irvine SURF - Summer Undergraduate Research Fellowship</u>

UC Irvine's Summer Undergraduate Research Fellowship (SURF) program offers undergraduate and master's diversity students an opportunity to work closely with faculty mentors on research projects and provides an intense course of graduate preparation workshops. SURF is designed for students who plan to pursue a Ph.D. or M.F.A. degree and enter academic careers, provides the tools needed to facilitate application, admission, and enrollment to graduate school. The SURF program is open to virtually all academic fields at UC Irvine. Qualified students with interest in pursuing their graduate program at UC Irvine are especially encouraged to apply. International students and UCI students are not eligible for the SURF program.

https://grad.uci.edu/prospective-students/graduate-preparation-programs/summer-undergraduate-research-fellowship/

#### **University of Washington Neurological Surgery Summer Student Program**

The UW Medicine Department of NeuroScience Summer Student Program provides "Bench to Bedside" exposure in the field of neurosciences. The program provides students seeking summer lab placements the opportunity to explore basic and clinical neurosciences. Every year our department invites a group of talented and highly motivated students interested in Neurosciences to participate in our 8-week Neurological Surgery Summer Student Program. This consists of a lab placement, attendance at Neurological Surgery Grand Rounds, OR observations, Friday talks by faculty to this group, and a final student PowerPoint presentation and graduation in front of family, friends and mentors.

https://neurosurgery.uw.edu/education/summer-student-programs#program