Janelia-LCPS Summer Internship Program

About Janelia

Howard Hughes Medical Institute (HHMI) is a science philanthropy organization whose mission is to advance biomedical research and science education for the benefit of humanity. We empower exceptional scientists and student to pursue fundamental questions about living systems. Opened in 2006, HHMI's Janelia Research Campus is a pioneering research center in Ashburn, VA, where scientists pursue biology's most challenging problems in a uniquely innovative and collaborative atmosphere. Janelia researchers are dedicated to understanding the function of neural circuits and developing synergistic imaging technology.

Program Information

The Janelia-LCPS Summer Internship Program will offer high school students attending Loudoun County Public Schools the opportunity to spend eight weeks at Howard Hughes Medical Institute's Janelia Research Campus, performing research using state-of-the-art technology and methods to answer questions in biology and computational science under the guidance of group leaders, scientists and engineers. Selected students will have the opportunity to attend seminars by Janelia researchers, as well as to participate in journal clubs and other events.

In 2023, the program will run from June 12th to August 4th. Please note that this is a full-time paid internship to which you will be dedicating 40 hours per week, and therefore it is expected that you will not undertake other organized activities that conflict with the program and will plan vacations around the internship dates. Students selected will be responsible for their own housing, food, and travel to and from Janelia.

Eligibility

We accept applications for students attending an LCPS high school who are in good academic standing and will be 16 years old by June 12, 2023.

We are looking for students with strong biology and computational background who have demonstrated a high level of academic standard and have experience in scientific research. Projects cover a wide variety of topics including machine learning algorithms, data annotation, reconstruction of neural networks, animal behavior analysis and optogenetics. High school students interested in computer programming, engineering, mathematics, physics, and neuroscience are encouraged to apply. Programming experience in Python, MATLAB, and/or C++ is strongly encouraged.

Application Materials

For full consideration, applications must be received by 5:00 PM on Wednesday, January 11, 2023. The application materials (Resume, statement of purpose, and description of activities) must be submitted electronically through the Janelia-LCPS Internship application portal (https://webinter.lcps.org/janelia/) as a single, combined PDF document. The file must be named with the student's last name and LCPS student number, e.g. Smith12345.

- A resume. The resume must include your LCPS student ID number as your heading.
- A 250–300 word statement of purpose that briefly describes your reasons for applying to the program.

Questions about this program must be addressed to science@lcps.org. Do not contact Janelia Research Campus.
● In 500 words or less, please describe any activities in or beyond the classroom that show potential for leadership in science, mathematics, computer science, and/or engineering, for example:
  o Participation in science, mathematics, computer science, and/or engineering competitions
  o Completion of scientific or engineering projects
  o Experience coding in Python, MATLAB, C, C++, or other languages
  o Completion of university-level coursework
  o Experiences conducting original scientific research

● One letter of recommendation from a math or science teacher. Only one letter of recommendation will be accepted. The letter should be from a teacher who can speak to how well you interact with your peers and classmates, how well prepared you are for your classes, the level of engagement in the classroom as well as your dedication to school activities, your receptiveness to constructive feedback, and your willingness to seek outside support before testing assumptions. The letter of recommendation must be submitted directly by the teacher to the Janelia-LCPS Internship application portal. Teachers will receive an email notification with directions from the portal once they have been selected by a student as their recommending teacher. The deadline for teacher recommendations is Tuesday, January 17 at 5:00 PM.

● You will not need to submit a transcript with the application materials, but please be aware that your transcript will be accessed and reviewed by LCPS staff as part of the selection process.

● No additional materials will be accepted or considered.

Evaluation and Selection Process

Top candidates will be contacted by email to schedule an interview by March 2, 2023. Once interviews have been completed, all applicants will be notified of the outcome of their application by April 3, 2023.
Guidelines for the pre-screening of applicants for LCPS Evaluators and Staff:

The applicant should be assessed both in the context of his/her particular high school and in the context of an extremely competitive applicant pool. *

Students most competitive for this program will have demonstrated superior scholastic achievement in mathematics and science. Ideal candidates will also show potential for leadership in science and mathematics as evidenced by their activities in and beyond the classroom, including but not limited to:

- Participation in mathematics, science, and engineering competitions at the regional, state, and national levels.
- Completion of hands-on projects displaying significant ability in science, technology, engineering, and mathematics design, implementation, and analysis.
- Completion of university-level coursework.
- Experience in a research laboratory, ideally conducting original scientific research.
- Experience coding in Python, MATLAB, Java, C, C++, or other languages.

Ideal candidates will display qualities such as leadership ability, creativity, motivation, curiosity, tenacity, initiative, originality, intellectual independence, responsibility, and maturity.

Teachers who are submitting letters of recommendation for applicants must submit the letter directly via email to science@lcps.org. The subject line of the email should be “Letter of Recommendation for Applicant Last Name, Applicant First Name”.

* For an applicant who has faced any hardships or unusual circumstances, maturity, determination and insightfulness, with which the applicant has responded to and/or overcome them should be considered when evaluating the applicant.