Introductory Activity: Identifying Applications of In-Class Learning by Analyzing Past iGEM Projects

Real World Projects

iGEM is the premier student research competition in synthetic biology. Many advances in the field of synthetic biology and biotechnology companies have come from successful iGEM teams. Therefore, past iGEM projects are valuable resources to analyze, learn from, and improve. In this activity, students will choose a past iGEM project to analyze. Students will identify applications of topics and techniques they have learned an area of the project that could be improved.

Learning Goals

Students will
- Gain a deeper understanding of real world applications of biology and synthetic biology
- Apply their in class learning to scientific analysis
- Improve their research skills through reading papers and searching databases
- Associate synthetic biology with data science through database searching and data analysis

Materials
- Computer
- Paper or notebook

Protocol
1. Navigate to www.igem.org
2. Search team wikis from past competition years
3. Choose an interesting project to read and analyze
4. Identify applications of topics and techniques you've learned in class such as the central dogma
5. Find an area of the project that could be improved
6. Detail your ideas about how to further develop the project.