

# Katherine Huang

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## Education

University of Massachusetts Lowell (2017–)

- Non-degree courses: Discrete Structures I, Honors Chemistry I-II

Lowell High School (2015–2019)

- Member of Latin Lyceum, an honors program
- Class rank: 2/750; unweighted GPA: 3.9/4.0
- Advanced Placement courses: Statistics (self-study), Computer Science (self-study), Calculus BC, Physics 1, US History, European History, Latin

## Experience

**Harvard University** | Research Intern (June–Aug 2017)

- Performed and analyzed computational simulations of quantum dots and quantum wells
- Improved protocol for selective etching of nanoscale semiconductor laser cavities
- Gained familiarity with cleanroom nanofabrication facility and scanning electron microscopy

**MAHacks** | Organizer (Sep 2017–)

- Customized and implemented HackMIT's open source registration platform for MAHacks, a Boston-area high school hackathon with a focus on entrepreneurship
- Maintained website, contacted sponsors and venue hosts, and helped run logistics
- Collaborated with local high schoolers through weekly video conferences and online tools

### Biogen

(July 2017)

Practiced biotechnology techniques to modify pBFP into pGFP. Met employees and learned about drug development process.

### UMass Lowell

(Nov 2016–Apr 2017)

Performed and analyzed docking and molecular dynamics simulations of potential drugs for botulism. Third Place at **Massachusetts State Science & Engineering Fair** 2017.

### Middlesex Community College

(Jan–Mar 2016)

Investigated effects of burned polyvinyl chloride on *E. coli* transformation and antibacterial resistance. Honorable Mention at MSSEF 2016.

## Skills & Languages

- **Software Development:** Python, Javascript (AngularJS), HTML, CSS (Sass), bash, git
- **Data Science & Communication:** R, d3.js, LaTeX, technical/copy/general writing
- **Computational Biology & Biotechnology:** Molecular docking and dynamics, PyMOL; bacterial transformation, growth media preparation, plasmid isolation and purification, site-directed mutagenesis, gel electrophoresis, polymerase chain reaction
- Languages: English (native), Chinese (intermediate)

## Activities & Awards

- Model United Nations | President (2015–)
- Chess Club & Team | President (2015–)
- National Latin Exam | Perfect Paper (2016), Gold Medal (2015–2017)
- National Honor Society (2017–)
- Hackathon Participant: MIT Blueprint, CodeDay Boston, MetroHacks, MAHacks