

Katherine Huang

hello@katherinehuang.co

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 (Jun–Aug 2017)

- Performed and analyzed computational simulations of quantum dots and 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–)

- Maintain website and registration platform, contact potential sponsors, and helped run logistics for MAHacks, an entrepreneurship-focused high school hackathon in Boston
- Collaborated with local high schoolers through weekly video conferences

Biogen

(Jul 2017)

Learned biotechnology techniques to modify pBFP into pGFP.

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 effect of burned PVC on *E. coli* transformation and antibacterial resistance. Honorable

Mention at MSSEF 2016. [Published](#) in *Journal of Emerging Investigators*.

Skills & Languages

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