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. 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 (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