Katherine Huang

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Education

University of Massachusetts Lowell (2017–)
- Non-degree courses: Discrete Structures I, Honors Chemistry I-II, Chemistry I-II Lab

Lowell High School (2015–2019)
- Member of Latin Lyceum, an honors program
- Class rank: 2/780; 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 students, and help run logistics for high school hackathon in Boston

University of Massachusetts Lowell | Research Intern (Nov 2016–Apr 2017)
- Ran docking and molecular dynamics simulations of potential drugs for botulism
- Third Place at **Massachusetts State Science and Engineering Fair** 2017

Middlesex Community College | Research Intern (Jan–Mar 2016)
- Investigated effect of burned PVC on *E. coli* transformation and antibacterial resistance
- Published in ***Journal of Emerging Investigators***

Select Projects

- **Discovering Protein-Coding Genes Through Hydropathy Disparity** | Model to predict protein-coding and noncoding regions by considering hydropathy of amino acid sequences
- **S1REN (Best Disaster Relief Prize at SheHacks)** | Open-source web app to detect potential rescue requests on Twitter during natural disasters using machine learning

Skills and Languages

- **R, Python, Javascript**, Java, HTML, CSS, bash, LaTeX, git
- Molecular docking and dynamics; bacterial transformation, plasmid isolation and purification, DNA quantitation, site-directed mutagenesis, gel electrophoresis, polymerase chain reaction
- Languages: English (native), Chinese (intermediate), Latin

Activities and Awards

- **National Center for Women & IT (NCWIT) Aspirations in Computing Award**: Massachusetts Winner
- Hackathon Participant: SheHacks, MIT Blueprint, CodeDay, MetroHacks, MAHacks
- President of Model United Nations Club and Chess Club
- National Latin Exam: Perfect Paper (2016), Gold Medal (2015–2017)
- Member of FIRST Robotics Competition Team 5962