Howard Hua

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EDUCATION

Washington University in St. Louis   St. Louis, MO
Bachelor of Science in Computer Science, Expected Graduation: May 2027   *GPA: 3.7/4.0*
Kent School   Kent, CT
Graduated with Academic Honors Diploma and High Honors   *September 2019 - May 2023*

TECHNICAL SKILLS

Programming Languages: Python, C++, Java
Libraries and Tools: MATLAB, PyTorch, Numpy, Git, Abinit, Latex, Microsoft Office Suite

EXPERIENCES

National Graphene Research and Development Center   Alexandria, VA
Student Researcher   *June 2022 - August 2023*

- Studied and researched topics in computational chemistry as student researcher under the guidance of Dr. Xuan Luo.
- Investigated the impact of pressure on electronic properties of various perovskite semi-conductors.
- Received silver metal in S.-T. Yau High School Science Award (North America Division).
- Publication: Pressure induced electronic and optical responses of vacancy-ordered double perovskites Cs_2BX_6 (B = Zr, Pd, Sn; X = Cl, Br, I): DOI 10.1088/1402-4896/acff8f

Kaggle
Beginner competitor   *December 2023 - Present*

- Competed in SenNet + HOA - Hacking the Human Vasculature in 3D and ranked 576 out of 1175 competitors.
- Utilized advanced techniques in image processing and deep learning to develop segmentation models.

Kent School Solar Car Challenge Team   Kent, CT
Mechanical Engineer   *March 2022 - May 2023*

- Designed components and utilized 3D printing technology to produce components to enhance the overall performance of our solar car, including windshields, front splitter, head light, etc.
- Operated CNC machine to precision-cut parts for the solar car, ensuring accuracy and quality in fabrication process.
- Won 1st place in classic division in Solar Car Challenge 2022-2023.

LEADERSHIP

Teaching Assistant   St. Louis, MO
Washington University in St. Louis, Computer Science Department   *Feb 2024 - Present*

- Teaching Assistant for CSE 247: Data Structure and Algorithms.
- Provided help to students by hosting Office Hours and assist instructors in weekly studios.
- Graded assignments and tests for classes with 200+ students.

Math and Science Peer Tutor   Kent, CT
Kent School   *September 2021 - May 2023*

- Respond to math and science queries from fellow students through organizing regular peer tutoring sessions in the school library.

Physics Club President   Kent, CT
Kent School   *February 2021 - May 2023*

- Organized executive meetings and club activities throughout the year.
- Hosted physics competitions including F = ma, PhysicsBowl, BPho in Kent school.