Haoyun “Aaron” Qiu

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Education

University of Illinois at Urbana-Champaign *May 2022*

Bachelor of Science in Mechanical Engineering GPA: 4.0/4.0

Minor in Electrical Engineering

Projects and Leadership

Air Conditioning & Refrigeration Center (ACRC) Urbana, IL

Undergraduate Research Assistant *November 2019 – Present*

- Collaborated with two graduate students to construct a vapor compression refrigeration module with scroll compressors to investigate capacity control and system performance
- Formulated layout and modularization for heat exchangers and accompanied Unistrut beams with Creo and SolidWorks, freeing up space for pipelines and sensors
- Devised component requirements for glycol circuit components such as tanks, tubing, and heaters to simulate heat source and sink advised by one graduate student
- Assisted in wiring and calibration of pressure and flow sensors to conduct data collection

Illini Motorsports Urbana, IL

Engine Team Member | Oil & Water Line Responsible Engineer *August 2020 – Present*

- Conceived the sizing scheme addressing oil and water circuits by updating past design to facilitate engine cooling and lubrication and minimize pressure loss
- Developed experiment procedures to prepare for cooling testing on the actual engine

CS 199 Clustering Final Project Champaign, IL

Team Lead *April 2020 – May 2020*

- Composed a program in Python with 4 other students to isolate faces and perceive number of people in one picture, recognizing 4 out of 5 faces when tested with team photo

Illinois Space Society (ISS) Urbana, IL

RASC-AL Team Member | Space Grant Structures Team Member *August 2018 – May 2019*

- Investigated consumables, ventilation, shielding, and risk matrix with MATLAB to deliver a reusable lunar module when participating in RASC-AL competition with 9 other students
- Spearheaded simulation using OpenRocket to finalize design after semester-long debates and inquiries, assisting the realization of a 1.10-Mach rocket for Space Grant competition

Technical Skills

Software: SolidWorks, Creo Parametric, MATLAB, AutoCAD, Autodesk Inventor, aPriori, LTspice, Mathematica, Engineering Equation Solver, Star CCM+, Microsoft Office, Arduino

Programming: Python data science & machine learning, C#, C++

Industrial Knowledge: Solid Mechanics, Thermodynamics, Fluid Mechanics, Analog Signal Processing, HVAC