Cameron Huang

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Education

Rice University, Houston, TX — *Expected Graduation May 2027*

*Bachelor of Science in **Computer Science** & Minor in **Data Science*** — **GPA:** 3.93/4.00

Coursework: Practical Machine Learning, Data Structures & Algorithms, Discrete Math, Linear Algebra, Regression Statistics

Work Experience

AbbVie — *North Chicago, IL*

Software & Machine Learning Intern — *Summer 2025*

- Developed ARMANI, a fullstack AI tool that leverages LLMs to automate compliance checks for medical affairs content.
- Improved compliance checking accuracy by **23%** and reduced review time by **37%**, streamlining approval workflows.
- Partnered with compliance managers to validate results against FDA guidelines and to conduct iterative testing for accuracy.
- Deployed ARMANI on **AWS** with containerized services, enabling scalable enterprise use for multiple USMA teams.

AbbVie — *North Chicago, IL*

Data Science Intern — *Summer 2024*

- Engineered a data lake to streamline and automate infusion pump flow rate testing data collection and analysis for **2200+** files.
- Created a program to detect and calculate pulse to pulse variations across differing flow rates and testing conditions.
- Generated custom scripts and tools with the data lake to assist pump engineers with bug and error diagnoses.

Projects

NASA Spacesuit User Interface Technologies (SUITS) — *September 2024 - Present*

President & Lead Software Developer

- Directing a team of 15+ developers and HF psychologist to build an augmented reality simulation for HoloLens 2 to reduce astronaut cognitive load during extravehicular activity operations (ingress/egress, navigation, and geological sampling).
- Designed backend server integration with TSS for telemetry data and interoperability with a simulated pressurized rover.
- Performed HITL testing for iterative improvements, decreasing cognitive load by **26%** and ingress times by **63 seconds**.
- Tested design at the Johnson Space Center, confirming simulation efficacy on night-time lunar terrain with NASA engineers

Autonomous Lunar Rover — *September 2024 - Present*

Simulations Lead - Rice Robotics

- Leading a team of 10+ engineers to develop Gazebo simulations for lunar lava tube navigation, mapping, and sampling tasks.
- Integrating lidar, camera, and movement controls into the rover using Python and ROS2, enhancing real-time responsiveness.
- Founded the University Rover Challenge branch within Rice Robotics, orchestrating team design, funding, and management.

Research

Mobility-X Lab: Advanced Driver Assistance Systems for Transit Buses — *Houston, TX*

AI Researcher — *January 2025 - Present*

- Implementing a deep reinforcement learning model with double Q-learning to improve self-driving capabilities for buses.
- Optimizing lidar, radar, and camera positioning on large transit buses to decrease blind spots and improve safety metrics.

SSP: Astrophysics Research at the University of Colorado Boulder — *Boulder, CO*

Computational Astrophysics Researcher — *Summer 2023*

- Developed Python algorithms to extrapolate the trajectory of near-earth asteroid 1998 RO4 using the Method of Gauss.
- Modeled a 50 million-year simulation using REBOUND and conducted a risk analysis with Monte Carlo error propagation.

Technical Skills

Programming Languages: *Python, Java, C#, C, R, JavaScript, HTML/CSS*

Machine Learning: *PyTorch, Scikit-Learn, OpenCV, NumPy, Pandas, Matplotlib*

Web Dev: *React, Node, Express, PostgreSQL*

Others: *Linux, Git, Figma, ROS 2, Unity*