Yuyang Wang

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EDUCATION

Northwestern University, Evanston, IL — June 2026
Bachelor of Arts in Computer Science and Mathematics
- Relevant Coursework: Machine Learning, Data Structures & Algorithms, PC Game Design, Linear Algebra, Probability

Colby College, Waterville, ME — Sep 2022 - May 2024
- Completed 67 credits towards a Bachelor of Arts in Computer Science with a 4.0 GPA as a Bixler Scholar. GPA: 4.0/4.0

SKILLS

- **Programming Languages**: proficient in Python, Java, C; intermediate in JavaScript, C#, Swift, HTML, CSS
- **Technical Skills**: Git, GitHub, Visual Studio Code, Jupyter Notebooks, Blender, LaTeX, Microsoft Excel
- **Frameworks:** Unreal Engine, Unity, NumPy, Matplotlib, TensorFlow, PyTorch

RELEVANT EXPERIENCE

Insite Lab, Colby College — Waterville, ME
Lab Research Intern — May 2024 - August 2024
- Developed advanced **VR** features in **Unity**, including guided boat movement, teleportation, and realistic underwater visuals.
- Engineered water physics, lighting effects, and interactive virtual buttons using **Unity**, improving user engagement by 35%.
- Maintained and upgraded the **VR** project by updating to the latest **Unity** version, boosting compatibility and performance.
- Presented at the 2024 Colby Undergraduate Summer Research Retreat (CUSSR) and earned second place.

CodeDay Labs — Remote
Lab Research Intern — June 2024 - August 2024
- Resolved issues related to axis sharing in the sharex, sharey, and clear methods, contributing to the **Matplotlib library.**
- Diagnosed and fixed rendering errors in plot lines caused by shared axes resets, improving subplot consistency and accuracy.
- Reviewed and tested code fixes with teammates collaboratively, achieving 100% pass rate in CI and pre-merge checks.

Department of Computer Science, Colby College — Waterville, ME
Computer Science Teaching Assistant — September 2023 - May 2024
- Led weekly office hours assisting over 50 students, providing guidance on **data structures and algorithms** projects.

Game Design Program, Colby College — Waterville, ME
Lead Computer Game Designer & Developer — January 2023 - Aug 2023
- Led a team of 5 designers and programmers in Agile sprints to develop 'Light,' an RPG game, achieving a game prototype.
- Programmed AI enemies with **Unreal Engine 5**, implementing patrolling, random movement, and player-chasing features.
- Designed puzzle-solving sections with laser emitters, mirrors, and sensors, boosting user engagement by 50%.
- Composed original soundtracks and sound effects in GarageBand, enhancing combat intensity and puzzle-solving immersion.
- Conducted multi-round game tests to identify bugs and created a 14-minute demo video to showcase game features.

PROJECTS

Virtual Offshore Wind Turbines: Unity-Based Simulation — *Poster* | *GitHub* Aug 2024
- Developed a **VR** project simulating offshore wind turbines in the Gulf of Maine to address concerns from fishing industry.
- Integrated interactive elements including virtual buttons to provide an engaging user experience during the simulation.
- Provided stakeholders with a **VR** view of underwater conditions to assess how mooring designs fit with existing fishing gears.

Fixed Issue with Shared X-axis Resetting When Calling cla() on Shared Axes — *GitHub* Aug 2024
- Ensured that clearing shared axes maintains plot accuracy, preventing unexpected behavior in complex subplot arrangements.
- Enhanced the reliability of **Matplotlib** for data scientists who rely on accurate visual representations in their work.

Lexical Landscape: Java Analyzer of Reddit Comment Frequency — *Report* | *GitHub* Apr 2023
- Developed a **Java** application using **HashMap/BST** data structures to analyze word frequency in large text data from Reddit.
- Analyzed word frequency in various years, identified trends, investigated time-based performance for different data structures.
- Provided insights into how language use on Reddit evolves, showcasing the application's capabilities in a detailed report.

Light — *Portfolio* Jan 2023
- Developed a 3D RPG game using **Unreal Engine 5**, featuring combat with AI-driven enemies and puzzle-solving scenarios.
- Implemented game mechanics such as sound effects and a player-chasing algorithm to enhance game experience.

Kinetic Symphony: Python Simulation of Thermodynamic Behavior — *Report* | *GitHub* Dec 2022
- Designed a **Python** tool that facilitates the understanding of thermodynamic principles through animated simulations.
- Employed **Matplotlib** for automated data analysis, presenting the correlation between temperature and particle behavior.
- Created simulations with **NumPy** and **Zelle graphics** to help Chemistry students visualize the behavior gas particles.