Alan Liu

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Education

University of Maryland, College Park (UMD)   **GPA: 4.0/4.0**
Honors Global Communities (HGC) Honors Program   Expected: May 2025
- B.S. Computer Science

Skills

Languages: C/C++, Java, Javascript, R, LaTeX, MATLAB
Software: Eclipse, Google Office Apps, Microsoft Office Apps, Adobe Creative Cloud Apps

Projects

JARVA (C++)   **March 2022 – May 2022**
Project Manager, Backend Programmer
- Optimized a 2D system of polygon collisions to efficiently run for hundreds of polygons at once (60 times per second).
- Organized goals and managed 4-member team for efficient project workflow.

Terraria Replica (Java)   **September 2021 – January 2022**
Project Manager, Frontend Programmer
- Applied knowledge of expandable programming and memory to recreate and optimize the popular 2D game *Terraria* using the *Slick-2D* graphics library.
- Implemented collision detection through self-constructed physics engine and separate program states.
- Managed 4-member team for efficient workflow.

Train Trouble (Java, JavaScript)   **October 2020 – March 2021**
Full Stack Developer
- Established engine for executable program file using the Slick-2D graphics library for regional, state, and national programming competition (1st place in Maryland State competition).
- Designed and constructed 2-D puzzle game around user input, data storage, and time-based leaderboards.

Astraeus (Java)   **December 2021 – March 2022**
Programmer
- Competed in community AI game competition, 2nd place result.
- Utilized 2D kinematics to create pivotal motion on a 2-D while optimizing unit production through object-oriented programming.

Work Experience

CAVA   **June 2022 – August 2022**
Prep Cook
- Organized, directed, and completed kitchen orders to maintain an efficient workflow of customer service and preparation tasks in a fast-paced work environment.