Alan Liu

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**Education**

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| **University of Maryland, College Park (UMD)**  Honors Global Communities Honors Program | **GPA: 4.0/4.0**  Expected: **May 2026** |
| * B.S. Computer Science * B.S. Mathematics |  |
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**Skills**

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| **Languages:** C, C++, Java, Javascript, R, LaTeX, MATLAB, Soy, Typescript |
| **Software:** Visual Studio Code, Eclipse, Git, Microsoft Office Apps, Adobe Creative Cloud |

**Experience**

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| Google  STEP Intern | **May 2023 – August 2023**  **Sunnyvale, CA** |
| * Developed internal demonstration to display the utilities of the Action Protection team and simplify integration for other services. * Organized implementation plans for frontend and backend components to detail design decisions and specify necessary changes. * Implemented integration testing and WebDriver testing to verify validity and reliability of RPC actions and responses. * Full stack development using Java, HTML with Soy framework, Typescript, and Javascript. | |
| CAVA  Prep Cook | **June 2022 – August 2022** |
| * Organized, directed, and completed kitchen orders to maintain an efficient customer service and preparation tasks in a fast-paced work environment. | |

**Projects**

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| [Data Science for Globalization](https://github.com/alanliu2009/R-Datasets) (**R**)  Programmer, Data Analyst | **August 2022 – Present** |
| * Identified, manipulated, illustrated global data in R for over 200 countries and thousands of data entries using **ggplot** and **gganimate** visual libraries. * Analyzed and depicted trends of leading global concerns for up to 4 variables at once. | |
| [JARVA](https://github.com/shuyelin06/JARVA) (**Java**)  Project Manager, Backend Programmer | **March 2022 – May 2022** |
| * Optimized a 2D system of polygon collisions and polygon physics to efficiently run for hundreds of objects at once (60 times per second) in creating a time-based arena shooter game. * Organized objectives and managed 4-member team with **GitHub** for efficient project workflow. | |
| [Terraria Replica](https://github.com/shuyelin06/JARVIS) (**Java**)  Project Manager, Frontend Programmer | **September 2021 – January 2022** |
| * Applied knowledge of expandable programming and memory to recreate and optimize the popular 2D game *Terraria* using the **Slick-2D** graphics library and **Perlin Noise** generation. * Implemented collision detection between hundreds of objects through self-constructed physics engine and separate program states. | |