

# Nicholas Jennings

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## ----- EDUCATION -----

### University of California, Berkeley

*B.A. Computer Science, Applied Mathematics*

2019 - 2023 (GPA: 3.97)

*M.S. Electrical Engineering & Computer Science*

2023-2024

Notable Classes: Human Computer Interaction, Data Structures, Computer Architecture, Probability, Numerical Analysis, Algorithms, Artificial Intelligence, Cryptography, Real/Complex Analysis, Computer Graphics.

## ----- RELEVANT EXPERIENCE -----

### University of California, Berkeley

Berkeley, California

*Undergraduate Research Assistant, Mentors: James Smith, Prof. Bjoern Hartmann*

Sep 2021- Present

- Jennings, N., Nandy, A., Zhu, X., Wang, Y., Sui, F., Smith, J., & Hartmann, B. (2022). GeneratiVR: Spatial interactions in virtual reality to explore generative design spaces. CHI Conference on Human Factors in Computing Systems Extended Abstracts. <https://doi.org/10.1145/3491101.3519616>
- Created a Virtual Reality based sorting tool for use in Generative Design workflows
- Designed novel spatial interactions for filtering a parametric design space

*Undergraduate Research Assistant, BLUES Mentor: Eleonora Losiouk*

Sep 2021- Present

- Conducted a review of prior work to create a taxonomy of known virtualization-based malwares and attacks for Android
- Built Gradle scripts for virtualizing malwares and assessing their detectability by commercial antivirus apps. Used Bash, Gradle, and Python scripts to create an semi-automated system for identifying virtualization-based malwares from virus databases, allowing for more in-depth analysis

### Amazon (AWS)

Seattle, WA

*SWE Intern*

May - Aug 2022

- Designed and implemented a service which used AWS services to send scheduled notifications to specified subsets of mobile app customers.
- Designed the service for easy integration with future tools, and documented how these extensions should be implemented.

### California State University, San Marcos

San Marcos, CA

*Computer Science Intern*

Jan - Mar 2019

- Aided in a qualitative study on alternate methods of computer file structure representation
- Used the Unity Engine to create a three-dimensional file visualization system compatible with GitHub

### University of Michigan

Ann Arbor, MI

*Economics Intern (40 hrs/ wk)*

May - June 2017

- Collected probate information from local records as part of a larger project to create a national database
- Used the Puppeteer web scraping library to successfully develop and deploy web scraping software to automate probate data extraction

## ----- PROJECTS -----

### Firework Simulation (HLSL, C#, Unity)

[Link](#)

- Custom firework/smoke simulation and renderer

### ASCII graphics renderer (C++)

[Github Link](#)

- First person camera / controller using ASCII characters, runnable in terminal

### Raymarcher Kaleidoscope (HLSL, C#, Unity)

[Github Link](#)

- Raymarch shader for Unity, designed to take input from standard unity gameobjects for easy manipulation

## ----- ADDITIONAL SKILLS -----

- |           |               |          |
|-----------|---------------|----------|
| - Java/C# | - C/C++       | - Python |
| - AWS     | - HTML/CSS/JS | - Github |

