

Nicholas Jennings

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EDUCATION

University of California, Berkeley

M.S. Electrical Engineering & Computer Science

2023 - 2024 (GPA: 4.0)

B.A. Computer Science, Applied Mathematics

2019 - 2023 (GPA: 3.94)

- **High Distinction** in General Scholarship
- **Notable Classes:** Human-Computer Interaction (UI/UX), Numerical Analysis, Artificial Intelligence, Computer Graphics, Linear Algebra, Data Structures, Computer Architecture, Cryptography, Real/Complex Analysis, Programming Language Design, Probability, AR/VR, Frontend Design

RELEVANT EXPERIENCE

Amazon (AWS)

Seattle, WA

Software Engineer Intern

May - Aug 2023

- Designed and implemented a gamification extension to an internal iOS application and augmented reality app component.
- Utilized RealityKit, in conjunction with native AWS REST backend, and services such as Lambda, DynamoDB, and SNS.

Software Engineer Intern

May - Aug 2022

- Designed and implemented service using TypeScript and Java to send scheduled notifications to mobile app customer groups.
- Built service (actively used in production) for easy integration with future tools, and wrote detailed extension documentation.

Berkeley Institute of Design

Berkeley, California

Researcher, Mentors: James Smith, Prof. Bjoern Hartmann

Sep 2021- Present

- Developing a gesture-based virtual interaction system for LLMs as part of an ongoing research project.
- Published paper: Jennings, N. et. al. 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 Spatial Computing based sorting tool in Unity3D for use in Generative Design workflows.
- Developed a React-based VS Code extension to assist creative coders in programming p5.js art for ongoing research.

UC Berkeley, BLUES Lab

Berkeley, California

Undergraduate Research Assistant, BLUES. Mentor: Eleonora Losiouk

Sep 2021- Sep 2022

- 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.

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.

PROJECTS

BlossomVR (C#, Unity3D)

[App Lab](#)

- Meditation VR arcade game. As team lead I worked on the overall app architecture and design, and oversaw our initial beta release to the Meta App Lab.

ASCII graphics renderer (C++)

[GitHub Link](#)

- First person camera controller using ASCII characters. The rasterizer allows for dynamic lighting and shadows.

Firework Simulation (HLSL, C#, Unity3D, HTML)

[GitHub Link](#)

- Custom firework/smoke simulation and renderer. As the chief graphics programmer I developed the smoke rendering and lighting systems

ADDITIONAL SKILLS

- **Technologies:** Java, C#, Python, C/C++, HTML, CSS, Javascript, .NET, Unity3D, HLSL, Swift, RealityKit, AWS
- Frontend design, full-stack development, mobile/iOS development, AR/VR, scripting, research