

# Eduard Mirzoyan

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## EDUCATION

**University of California, Berkeley** | B.S in Electrical Engineering & Computer Science | GPA: 3.7 August 2021 - May 2023

- *Coursework*: Operating Systems, Computer Security, Computer Graphics, Artificial Intelligence, Machine Architecture, Discrete Mathematics, Data Structures
- *Extracurricular*: Member of the Game Design and Development Club and Student-Lead Course

**De Anza College** | A.S. in Computer Science | GPA: 4.0

August 2019 - May 2021

- *Coursework*: Algorithms, Abstraction, Program Efficiency and Runtime, Recursion, Object-Oriented Programming, Advanced C++ Programming, x86 Assembly

## EXPERIENCE

**Game Development Mentor**

August 2022 - May 2023

@ UC Berkeley's Game Design and Development Club | Berkeley, CA

- Lead a group of 5 students through the process of creating a game in Unity
- Taught mentees proper debugging procedures and design philosophy
- Conducted numerous code review sessions amongst mentees
- Structured the development process through a 10+ page design document
- Fixed gameplay bugs and polished codebase to maintain clarity

**Lead Game Designer**

September 2021 - March 2022

@ Augminted Labs | Milwaukee, WI

- Brainstormed, prototyped and produced 7+ design documents for game mechanics, level design and UI
- Improved user experience and player retention through hosting various focus groups and giving 15+ surveys
- Facilitated weekly meetings amongst other departments such as programming, sound design and marketing
- Increased playtester community by ~20% after implementation of said gameplay mechanics
- Researched 20+ games for insight and inspiration towards new characters and mechanics

## PROJECTS

**Pixel Physics Simulation Engine**

[Demo](#) | C++

- Uses a neighbor-based physics algorithm to determine behavior of individual elements, represented as pixels
- Utilizes OpenGL to take advantage of parallelization when rendering
- Incorporates GLFW to ease the usage of UI and input handling

**Platformer Pathfinder Demo**

[Codebase](#) | Unity, C#

- Generates scene via Prim's Algorithm and Delaunay Triangulation to ensure randomness
- Finds optimal path to a chosen point, whilst considering gravity, using Dijkstra's algorithm
- Executes generated path using custom movement script

**Lightweight Version Control System**

[Codebase](#) | Java

- Mimics the functionalities of version control through a combination of Hashmaps and file I/O
- Utilizes the Java standard library to implement Git commands such as init, add, commit, log, branch, checkout functions
- Encodes files using SHA-1 to store files as blobs to ensure a memory-less system

**Multi-User Chatting Application**

[Codebase](#) | Java

- Models an online chat room via multiple server-client connections through TCP
- Stores and transfers information between users in real-time using serialization
- Handles up to 10 clients on the same system by assigning each user its own thread

## TECHNICAL SKILLS

*Programming Languages*: Java, Python, C#, C++, C, SQL, JavaScript/HTML/CSS, Assembly x86, RISC-V and web frameworks like React and Django.

*Applications*: Unity, Git, Adobe Photoshop, Vegas Pro, Excel, Microsoft Word