Spencer Chang – Software Developer

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EDUCATION

University of Southern California, Viterbi School of Engineering **Los Angeles, CA**
Computer Science August 2020–Present
GPA: 4.0
Honors: Dean's List (Fall 2020, Spring 2021, Fall 2021)
Expected Graduation: May 2023

EXPERIENCE

USC Viterbi **Los Angeles, CA**
Course Producer January 2022–Present

- Serving as a course producer for CSCI170 (Discrete Methods in Computer Science). Holding weekly office hours for answering student questions and proofreading course materials (quizzes, homeworks, answer sheets, etc).

Corpus Callosum (CoCa) **Los Angeles, CA**
Vice President September 2020–Present

- Handled member recruitment and semester activity planning.
- Designing and implementing creative generative art programs in *p5.js*. Awarded 1st place in the CoCa Final Project competition.
- Working with other e-board members to assist club members in designing and implementing their group projects.

PROJECTS

Dreamland Confectionary
Engineer Fall 2022

- Collaborating closely with designers and other engineers to implement gameplay mechanics and fix various bugs through Unity.
- Attending biweekly meetings with development team to discuss sprint planning and task distribution. And weekly labs to collaborate in-person with the rest of the team.

201 Cards – *Web Tool* Fall 2022

- Developed a fully functioning networked multiplayer game in the Unity game engine. Implemented full server functionality through Java.

DE Grapher – *Web Tool* Summer 2021

- Engineered a 1st order differential equation visualizer using the *Godot Engine* (C#).
- Added functionality for customizable graph bounds/step size, Euler's method IVP approximate solution solver, and real-time slope field visualizer.

King of Rats – *Video Game* – *Engineer and Designer* Spring 2021

- Programmed gameplay mechanics using the Unity (C#) to develop a tower-defense and base-building hybrid game.
- Conducted two playtest sessions (11 players in total) to gauge player engagement and game balance. Collected post-playtest data via player questionnaires to make statistical analysis and visuals to guide design and development.

Remnants – Board Game – Designer and Usability Tester Fall 2020

- Collaborated with team of artists and designers to release a polished physical board game. Regularly met with team to pitch and discuss new ideas for improving game mechanics and balance.
- Organized 8 playtest sessions to gauge player enjoyment and engagement on game mechanics.

Vortex Dodger – *Video Game* Spring 2020

- Completed 2D "bullet-hell" game in *p5.js* (JavaScript) with purpose of helping players improve dodging skills.
- Implemented bullet-delivery systems, safe-zone collision detection, and user interface.

RELEVANT COURSEWORK

- Data Structures and Object-Oriented Design
- Linear Algebra and Differential Equations
- Discrete Math
- Introduction to Artificial Intelligence (**In Progress**)
- Computer Graphics (**In Progress**)
- Video Game Programming (**In Progress**)
- Introduction to Algorithms and Theory of Computing
- Introduction to Software Development

SKILLS

Languages: C/C++, Python, Java, JavaScript, C#, *LaTeX*
Software: Visual Studios Code, Visual Studios Community, GitHub, Adobe Photoshop, Krita, Aesprite, Unity, Godot
Spoken Languages: English, Mandarin
Hobbies: Art (Pixel, Pencil, Oil)

MEMBERSHIPS

Member, Alpha Lambda Delta Honor Society March 2021–Present
Member, Phi Theta Kappa Honor Society July 2020–Present