Spencer Chang

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EDUCATION

University of Southern California, Viterbi School of Engineering — **Los Angeles, CA**
Computer Science (Games) — 2020-Present
Relevant Coursework: Introduction to Programming, Data Structures and Object Oriented Design, Linear Algebra and Linear Differential Equations, Discrete Math, Intermediate Game Design Workshop
GPA: 4.0
Honors: Dean's List (Fall 2020, Spring 2021)

De Anza College — **Cupertino, CA**
Computer Science — 2019-2020
Relevant Coursework: Calculus III, Engineering Physics (Classical, Thermo, and E&M)
GPA: 4.0
Honors: Dean's List (Fall 2019, Winter 2019, Spring 2020)

SKILLS

Programming Languages: C#, C++, JavaScript, Java, GDScript
Frameworks: P5.JS, MonoGame, Node.JS
Game Engine: Unity, Godot
Bilingual: English, Chinese

LEADERSHIP AND INVOLVEMENT

SouthPost Youth — **San Jose, CA**
Vice-President — March 2018 – June 2019
- Organized volunteer activities for the organization and managed/motivated team efforts towards community involvement.

Study-Buddy Society, Monta Vista High School — **Cupertino, CA**
Volunteer Tutor — February 2018 – May 2018
- Volunteer tutor at a high school program. Tutored high school biology and geometry.

Member, Phi Theta Kappa Honor Society — July 2020 – Present

Member, Alpha Lambda Delta Honor Society — March 2021 – Present

ACADEMIC PROJECTS

King of Rats – *Video Game* — Spring 2021
- Worked on a team as a programmer and designer. Programmed in the Unity (C#) to create a tower-defense and base-building hybrid game. More information on project page here

Kaufman Touhou – Video Game — Spring 2019
- Programmed in MonoGame Framework (C#) to create a space-themed, 2D shooter game. Developed a basic game engine that allowed for 4-player local multiplayer, collisions, physics, animations, UI. More information on project page here.

Diamond in the Water – *Video Game* — Fall 2019
- Programmed in MonoGame Framework (C#) to create a "bullet-hell" game in which bullet travel in the path of basic economic curves (supply-demand, Phillip's curve, business cycle, etc). Programmed a game mode that simulates opportunity cost and comparative advantages. More information on project page here.

PERSONAL PROJECTS

DE Grapher – *Web Tool* — Summer 2021
- Programmed a simple 1st order differential equation visualizer through *Godot* (C#). Implemented simple equation "parser" to turn user string input into a math function, implemented Euler's method to approximate real-time solution curves to given DE's based on initial values, implemented visualizer for drawing slope fields. Use the tool here.

Vortex Dodger – *Video Game* — Spring 2020
- Programmed a simple 2D "bullet-hell" game through the *p5.js* (JavaScript). Programmed particles that travel in linear paths, launcher" objects that fire particles in various ways (shotgun, rotation, dropper), a simple-collision detection system between player and particles, and simple UI for displaying pop-up text. Purpose of game is to improve dodging abilities in games. Play the game here.