

# MELISSA RAN

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Stanford, CA 94305

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## EDUCATION

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### Stanford University

June 2024

*Undeclared, Undergraduate*

- *Honors*: GPA 4.00
- *Relevant Coursework*: Programming Abstractions, Linear Algebra and Differential Calculus of Several Variables, Intro to Discrete Mathematics, Computer Organizations and Systems

## PROJECTS

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### Procedural Cake Decorator – *Developer*

July 2020

- Developed a Unity mobile game in team of 2 about creating and sharing 3D cakes.
- Implemented procedural icing mesh drawing and marching squares in polar coordinates for glaze.
- Implemented social features: export to GIF; upload abstracted cakes to Firebase, share with other users.
- Implemented remote asset management using Unity's Addressable system, modeled 3D assets in Blender.

### Coffeeshop AU – *Director*

Feb 2019

- Developed a 3D “playwriting” tool in Unity, translates a screenplay written in a domain specific language to a 3D animation.
- Created provided 3D models, backgrounds, animations, etc. with Blender
- Created a web editor with syntax checking. Uses Firebase to store user's screenplays, and allows screenplays to be shared and “played” given a code.

### Plus Adventure – *Director*

August 2018 – November 2018

- Developed Unity 3D role-playing game in collaboration with online community of 250+ people.
- Managed team of 20+ artists, writers, and composers: developed conveyor belt-style pipeline for collaborative asset creation, delegated tasks, led brainstorming sessions, mediated conflicts.
- Released on [itch.io](https://itch.io) and featured by [Indie Games Plus](https://indiegamesplus.com).

## AWARDS

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- ESA Video Game Award 2019, Art. Write. Now Tour 2019, Scholastic Art & Writing National Gold Medal (Video Game Design), Scholastic Art & Writing National Silver Medal (Future New), Celebrating Art Top Ten, National AP Scholar 2019

## SKILLS

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- Unity (procedural meshes, shaders & post processing), C++, C#, Java, Javascript, Blender (modeling & animation), Adobe Photoshop, Firebase, OpenGL