

# Spring Nguyen

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## Education

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**Orange Coast College** (GPA 3.9, Computer Science) (2018)  
**University of California, Irvine** (GPA 3.3, Computer Game Science) (2018 - 2022)

## Work Experience

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**Project CELL, UC Davis ([louielab.org/SpaceZoologist](http://louielab.org/SpaceZoologist))** (2021 - 2022)

### *Technical Lead*

- Led a team of programmers to develop an educational game in Unity tailored to teach biomedical students
- Managed and assigned programming tasks using agile development
- Created a tile map system that automatically generates terrain detail and blends adjacent tiles
- Improved codebase by introducing more efficient algorithms and reducing code size
- Managed project changes through version control with Git

## Projects

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**Project Rubicon** (2021 - 2022)

- Collaborated with a team for a rhythm game on mobile devices capable of running three separate game modes simultaneously
- Created an efficient 2D Bezier spline renderer using signed distance fields
- Developed Bezier curve editor for designers to quickly prototype splines in game
- Utilized undocumented pre-existing codebase to create a new type of rhythm game

**Colormancy** (2021)

- Contributed to the development of an online, multiplayer, spell-slinging painting game in Unity
- Developed a real-time painting mechanic that works over networks on any 3D model
- Implemented a spell system allowing dynamic combinations of different spell properties
- Produced real time VFX using custom models and shaders

**Synthwave Retro Scene** (2021)

- Developed custom skybox shader for dynamic day/night system
- Programmed custom post processing emulating old television static and 80's neon lighting
- Procedurally generated background environment using pseudorandom algorithms and noise

## Skills

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- **Programs:** Maya, Photoshop
- **Languages:** C++, Java, JavaScript
- **Math:** Linear Algebra, Diff. Eq., Multivariable Calculus
- **Others:** Microsoft Office, React.js, OpenCV