Derek Iniguez

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Education

Cal State University, Monterey Bay **August 2016 – December 2020**

- B.S. degree in Computer Science with a specialization in Game Development.

Work Experience

Digital NEST **February 2018 – December 2019**

Teacher's Assistant, Salinas

- Digital NEST teaches young students the technical skills needed for the digital world such as web and software development.
- Fostered a positive learning environment by answering programming questions and assisting with student projects.
- Multi-tasked responsibilities like providing assistance to students in navigating problems with Unity and C#, as well as providing counsel to team members when facing difficulties explaining concepts to students.
- Oversaw projects making sure that the students were keeping up with the lesson plans and understood.

VR Project for Digital NEST (Unity C#)

- Oversaw the creation of a game in VR using Unity, Oculus, and C# while paired with a group of students as well as a "client."
- Client outlined their requests revolving around grabbing objects in VR to perform behind-the-desk tasks.

Projects

2D Endless Cube Runner (Unity C#) **In progress**

- Set different possible outcomes for procedural level generation using a Markov chain.
- Created a shop where players can purchase songs, skins, lights, and particle effects via in-game-currency.
- Used Object Pooling to create instances of falling tiles and reuse them throughout the level's generation.

www.derekiniguez.com (HTML, CSS, JavaScript) **November 2022**

- Designed and implemented a website to showcase my indie games developed in Unity.
- Created a honeypot and successfully reduced spam messages sent to personal email by 86%.
- Scripted the navbar to follow users down the page and structured the site to be responsive and mobile friendly.
- Optimized across site's performance, accessibility, best practices, and SEO to 99%, 94.4%, 96.8% and 100% respectively according to PageSpeed Insights for PC.

Zombie Survival Game VR (Unity C#) **May 2022**

- Used XR plug-in framework to support VR project and Object Pooling to create/store multiple game objects.
- Applied navigation and pathfinding to AIs to maneuver the environment and pursue target – player.
- Programmed interactive User Interface design for win case, lose case, tutorial, main and pause menus.
- Experimented with abilities for in-game movement such as snap turning and smooth, continuous movement.

Obstacle Dodging Mobile Game (Unity C#) **June 2021**

- Instantiated several different objects at runtime with randomized size, color, light, position, and speed.
- Made speed of objects depend on: randomized speed at runtime and total power ups the player has collected.
- Final projects became a multi-platform game playable on PC and Android.

O-PONG (Unity C#) **February 2021**

- This game uses the manipulation of splines for players' paddles to follow an ovular pattern.
- Randomized position for the ball to spawn in, as well as direction to follow.
- Features UI for a pause menu and options menu allowing player to change both player's and ball's speed.

Virtual Aquarium Tank System (Unity C#) **December 2020**

- Created the Fish Evaluation Vector for VATS utilizing JSON files filled with databases of knowledge on sea life, including: name, scientific name, animal type, habitat, depth, size, diet, range, and conservation status.
- Provided a responsive UI that swaps through the different information and 3D models found online.
- Augmented post processing effects to elicit better visuals for the ocean with color grading, depth of field, motion blur, saturation and vignette.

University Website Projects **December 2020**

- Website for around adopting pets, featuring random dog facts from an API, and mission statement, links to learn more.
- Developed a US geography quiz that asks 10 questions with different types of inputs, grades users, and keeps track of attempts.
- Made my own open library that retrieves book info and its cover image from openlibrary.org using an ISBN number.
- Created an informational website on game development featuring an API that retrieves new motivational quotes every refresh.
- Sign-up form that checks password confirmation, and uses API to display city, coordinates, state, and county.

iTag (Swift) **December 2020**

- iTag, a group project, is an augmented reality tag game application where players can sign up and join.
- Features mini maps, real-time notifications and tracking of other tag participants.
- Our group won an award for Most Innovative App for CodePath's IOS Virtual Demo Day.

Parstagram (Swift) **November 2020**

- Instagram clone with a custom Parse backend that allows a user to post photos and view a global photos feed.
- Users can sign up to create a new account, login, take a photo, add a caption, and post it to the server.
- Can stay logged in across restarts, log out, view comments on a post, and add a new comment.

Tweeter (Swift) **October 2020**

- Twitter mockup where a user can view tweets with user profile pic, username, and tweet text.
- Users can login, log out, stay logged in across restarts, compose and favorite tweets.
- Past tweets get loaded in infinitely, and can pull down to refresh.

Flixter (Swift) **September 2020**

- Movie browsing app like Netflix where users can tap a cell to see more details about a particular movie.
- Can view and scroll through a list of movies now playing in theaters.
- A Detailed screen of the movie can be seen by tapping a poster in the collection view.

Programming Skills

- C#, C++, SQLite, HTML, CSS, JavaScript, EJS, jQuery, AJAX, Swift

Software

- Visual Studio, Unity3D, Unreal Engine 4, Github, Blender, DirectX, Xcode, AWS