Mike
Senior Gaming Software Engineer

SUMMARY

- Software Engineer with 7+ years of professional experience in developing software for simulation/training games, theme park rides, and scientific research using Unity and Unreal game engines.
- Proficient in C# and C++ programming languages, with experience in Unity 3D and Unreal 4.
- Skilled in hardware integration, telemetry systems, and animatronics.
- Experienced in developing interactive experiences and gameplay programming.
- Strong background in computer science with a Master's Degree in Interactive Media and a Bachelor's Degree in Communications.
- Familiar with source control tools such as Perforce, Source Tree, and GitHub desktop.
- Knowledgeable in project management tools like Jira, VSTS, and Trello.
- Relocated to Tokyo to pursue Japanese language studies, and is actively looking for game industry opportunities in Japan.

TECHNICAL SKILLS

Main Technical Skills	Unity (7 yr.), Unreal Engine (7 yr.), Linux (7 yr.), C++ (7 yr.)
Programming Languages	C# (7 yr.), C++ (7 yr.)
JavaScript Frameworks	Node.js, Vue.js (1 yr.)
Collaboration, Task & Issue Tracking	Atlassian Trello, Jira
Operating Systems	Linux (7 yr.)
Platforms	Unity (7 yr.)
Deployment, CI/CD & Administration	VSTS
Other Technical Skills	Game Design, Modeling & texturing, Unreal Engine (7 yr.)

WORK EXPERIENCE

Software Engineer, Mario Kart Ride

Duration: May 2018 - Nov 2022
Worked on various interactive experiences where I was responsive for gameplay programming. Primary gameplay programmer for a old west style salon shooting

game where you used your hands to point and shoot at targets on the screen. This project involved using tracking data from a Kinnect.
Summary:

- Made projection calibration software in UE4 and 3D tracking middleware for monitoring and increasing performance of 3D tracking software in C++. The calibration software involved using sending commands to robots to move to different poses and then performing a calibration pattern that I'd then take readings from light sensors on the robot to calculate the calibration data.
- Worked in C++ on Linux developing an IO server to process tracking data and other inputs and then distribute that to clients
- Worked on a C++ application for linux that handles AR tacking for the Mario Kart ride
- While running both on the ride vehicle and in a server room this application handles all show level interactions for the ride system
- This involved a lot of hardware integration work and testing in the field to improve latency and reliability of the system
- I also set up a telemetry system within this application to help with the testing and operation

Responsibilities: Worked on various interactive experiences, responsive for gameplay programming. Developed an IO server to process tracking data and distribute it to clients. Worked on an application for AR tracking on the Mario Kart ride. Conducted hardware integration work and testing to improve system latency and reliability. Set up a telemetry system for testing and operation.
Technologies: C++, Linux

Software Engineer, Tracking System Calibration and Monitoring

Duration: May 2018 - Nov 2022
Summary:

- Developed a NodeJS app to assist with calibrating a tracking system
- Developed exercise tracking software as a C# microservice
- Made projection calibration software in UE4 and 3D tracking middleware for monitoring and increasing performance of 3D tracking software in C++

Responsibilities: Developed a NodeJS app for tracking system calibration. Created exercise tracking software as a C# microservice. Developed projection calibration software in UE4. Created 3D tracking middleware for monitoring and improving performance of 3D tracking software.
Technologies: Node.js, C#, UE4, C++

Software Engineer, Interactive Experiences

Duration: May 2018 - Nov 2022
Summary:

- Worked on various interactive experiences where I was responsible for gameplay programming
- For example, I was the primary gameplay programmer for an old west style salon shooting game where you used your hands to point and shoot at targets on the screen
- This project involved using tracking data from a Kinect

Responsibilities: Developed gameplay programming for interactive experiences. Served as the primary gameplay programmer for an old west style

salon shooting game using hand tracking data from a Kinect.
Technologies: Kinect

Unity Developer, Training Games for Nurses & Project Managers

Duration: Feb 2016 - May 2018
Summary:

- Developing training games in Unity for nurses and project managers
- Working on gameplay and UI programming, and asset integration
- These training games simulated the work of nurses and required creating an accurate simulation of patient appearance and behavior, as well as simulating the vital readings to what would be accurate in the given situation

Responsibilities: Developed training games in Unity for nurses and project managers. Worked on gameplay and UI programming, and asset integration. Created accurate simulations of patient appearance, behavior, and vital readings.
Technologies: Unity

Teacher/IT Specialist, Minecraft and Mobile Game Development

Duration: May 2015 - July 2015
Summary:

- Taught students ages 7-19 how to develop mods for Minecraft and small mobile games
- Troubleshooted any technical issues that arose in the course of teaching

Responsibilities: Taught students ages 7-19 how to develop mods for Minecraft and small mobile games. Troubleshooted technical issues.
Technologies: Minecraft, Mobile Game Development

Teacher, Video Courses on Game Design

Duration: March 2015 - Jan 2016
Summary: Created video courses that teach game design, 3D art, and programming.
Responsibilities: Created video courses on game design, 3D art, and programming.
Technologies: Game Design, 3D Art, Programming

GIST Group Intern, Geographical Statistical Analysis

Duration: Dec 2012 - Aug 2013
Summary:

- Created a game environment for analysts to perform statistical analysis on geographical regions using Unity and a database of demographic, geographic, and economic information
- This included creating visualizations of the geographical data such as displaying a heat map of a selected data set

Responsibilities: Created a game environment for analysts to perform statistical analysis on geographical regions. Developed visualizations of geographical data such as heat maps.
Technologies: Unity, Database

Software Engineer, Exercise Tracking Microservice

Duration: Nov 2020 - Nov 2022
Summary:

- Developed a microservice that takes tracking data from the Kinect and can evaluate if a given exercise is being done correctly and track the reps
- Used physics calculations to determine the amount of effort put into the exercises being performed by the user
- The software is data driven in a way that we can create configs to add new exercises to be tracked

Responsibilities: Developed a microservice for tracking exercise data from the Kinect. Implemented physics calculations to evaluate exercise correctness and track repetitions. Created a data-driven system for adding new exercises to be tracked.
Technologies: Kinect, Physics Calculations

Software Engineer, Mini Golf Games

Duration: Jan 2022 - Oct 2022
Summary:

- Developed two games integrated into a mini golf course using Unity
- Worked closely with the art team to ensure the game's visual effects were fun and exciting for players
- Each interactive communicates with a back end API and performs some game component to allow extra interactivity with the holes in the mini golf course

Responsibilities: Developed two games integrated into a mini golf course using Unity. Collaborated with the art team to create engaging visual effects. Integrated with a back end API to enable interactivity with the mini golf course holes.
Technologies: Unity, API Integration

Software Engineer, Animatronics Tracking and Projection Mapping

Duration: June 2021 - Nov 2022
Summary:

- Developed software to help with the tracking of animatronics in the real world for the purpose of projection mapping onto them
- Created software in Unreal Engine 4 to perform a calibration procedure on a series of projectors
- Created middleware for providing telemetry data from the tracking system

Responsibilities: Developed software for tracking animatronics and projection mapping. Created calibration software in Unreal Engine 4. Developed middleware for telemetry data from the tracking system.
Technologies: Unreal Engine 4, Projection Mapping, Middleware

Software Engineer, Dark Ride Integration

Duration: May 2018 - Nov 2020
Summary:

- Developed software to integrate dark ride hardware with game software to create immersive experiences
- Developed tools for maintaining and monitoring ride systems
- Contributed to the tracking software for the AR system

Responsibilities: Developed software to integrate dark ride hardware with game software. Created tools for maintaining and monitoring ride systems. Contributed to the tracking software for the AR system.
Technologies: AR, Dark Ride Hardware, Tracking Software

Unity Developer, Hololens Anatomy Game

Duration: Feb 2017 - Dec 2017
Summary:

- Developed a hololens game where players could learn about human anatomy
- Responsible for the entire development of this demo, including UI and game mechanics

Responsibilities: Developed a hololens game for learning about human anatomy. Oversaw the entire development process, including UI and game mechanics.
Technologies: Hololens, Unity

Unity Developer, Project Management Training Game

Duration: Feb 2017 - Dec 2017
Summary:

- Developed a project management training game where players assign tasks for sprints and make decisions that affect task completion
- Created a UI management system and various in-game apps

Responsibilities: Developed a project management training game. Created a UI management system and in-game apps. Implemented scoring logic and NPC movement.
Technologies: Unity

Unity Developer, Patient Care Simulation

Duration: Feb 2015 - Oct 2015
Summary:

- Developed a game where players assess and care for patients over the course of a simulated 12-hour shift
- Worked with the art team to create realistic patient behavior and built a tweening library for UI animation

Responsibilities: Developed a game where players care for patients over a simulated 12-hour shift. Collaborated with the art team to create realistic patient behavior. Built a tweening library for UI animation.
Technologies: Unity

Unity Developer, Charge Nurse Simulation

Duration: Feb 2015 - Oct 2015
Summary:

- Developed a game where players resolve various scenarios that a Charge Nurse may face on a unit floor
- Responsible for UI/UX, gameplay systems, and art integration

Responsibilities: Developed a game where players resolve scenarios faced by a Charge Nurse. Created UI/UX, gameplay systems, and art integration.
Technologies: Unity

Unity Developer, Anesthesiologist Simulation

Duration: Oct 2015 - Jan 2017
Summary:

- Developed a game where players take the role of an anesthesiologist in various scenarios
- Responsible for UI, camera, and animation scripting

Responsibilities: Developed a game where players act as an anesthesiologist. Implemented UI, camera, and animation scripting.
Technologies: Unity

Unity Developer, Geographical Statistics Analysis

Duration: Dec 2012 - Aug 2013
Summary:

- Provided a virtual environment for GIST analysts to examine statistics across geographical regions
- Responsible for all Unity development on the project, including database integration and visualization

Responsibilities: Created a virtual environment for GIST analysts to examine statistics. Developed the project using Unity, including database integration and visualization.
Technologies: Unity, Database

EDUCATION

- **Florida Interactive Entertainment Academy**
  Masters Degree in Interactive Media. Primarily focused on gameplay programming and UI development.
  2013 - 2014
- **University of Tennessee**
  Bachelor of Science in Communications. Majored in Journalism and Electronic Media and Minored in Cinema Studies.
  2009 - 2013