

Software Engineer with 18+ years of experience creating top-earning arcade and console games. Proven expertise leading full-cycle development, shaping player-centric design, and optimizing for custom hardware across arcade and home platforms. Passionate about blending technical innovation with unforgettable player experiences.

## Work Experience

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Lead Programmer

Raw Thrills Inc.

Sep 2010—Present

### Project Leadership

- Led 7 complete projects including Jurassic Park Arcade, Cruis'n Blast, Superbikes 3 and Fast & Furious Arcade.
- Coordinated project timelines, feature milestones, and external field tests to keep development on track.
- Used deep domain knowledge of the arcade industry to keep our small team focused on features that matter most to game operators and players.
- Coordinated with cross-disciplinary teams (engineering, mechanical, art, QA, factory) to drive multi-year development, maintain decade-long production runs, and deliver novel gameplay with innovative, eye-catching hardware.
- During the COVID-19 lockdown, I pivoted our team to create Cruis'n Blast for the Nintendo Switch. This kept our team employed and working a profitable project during a time where existing business had slumped.

### Engineering & Design

- **Engines** - Developed games using a variety of engines. Starting from custom engines using C and C++, and later transitioned team to use Unity and C#.
- **Gameplay** - Shaped game design by contributing to core mechanics, player experience, and feature prioritization—ensuring designs aligned with arcade player behavior and technical constraints.
- **Physics** - Implemented bespoke physics for our racing games designed to give players of all ages an exciting experience with no learning curve.
- **Networking** - Implemented drop-in multiplayer on many different platforms & environments including custom engines, Unity, Windows, Linux and Nintendo Switch.
- **Asset Pipeline** - Planned asset creation and development pipelines to ensure efficient, coordinated workflows and optimized performance for target hardware.
- **Optimization** - Developed custom performance monitoring tools in conjunction with commercial profiling tools to ensure our games run at excellent frame rates with minimal hardware requirements.
- **CI/CD** - Developed custom build systems tailored to arcade-specific hardware, simplifying release processes and minimizing deployment issues.
- **VR Development** - Developed and shipped T-Rex Safari, a VR arcade experience where players interact with dinosaurs using Leap Motion (e.g., feeding a Brachiosaurus, holding a baby raptor). Built to run reliably on HP Reverb 2 headsets in unattended arcade environments, requiring no player setup or troubleshooting.
- **Tools** - Spearheaded new tools to improve development process, leading to faster iteration and improved quality. For example, building on Unity timelines, created an editor process to allow scrubbing through entire race paths while viewing environmental animation in sync with the player's progress.
- **Analytics** Integrated custom analytics tools to track player behavior, cabinet uptime, and earnings data—enabling data-driven tuning of difficulty, session length, and monetization strategies.
- **Generalist** - Stepped beyond core programming duties to fill gaps in VFX creation, sound design, and other unstaffed roles to ensure high-quality results and maintain project momentum with a small team.

## Software Engineer

## High Voltage Software

2009-2010

- Shipped **Iron Man 2: The Video Game** for Nintendo Wii and Sony PSP
- Implemented enemies, boss fights, unique player weapons and cinematic quick-time events.
- Developed tools as part of their “Advanced Technology Group” for their custom game engine.

## Mid-Level Programmer

## Incinerator Studios (THQ)

2007-2009

- Shipped **MX vs ATV Untamed** for PS2 and Wii and **SpongeBob and Friends: Globbs of Doom** for PS2 and Wii.

## Education and Certifications

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- **B.Sc Computer Science Engineering**, The Ohio State University

## Technologies and Languages

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- Languages: C, C++, C#, Python, MEL, Shell, Batch,
- Technologies: Unity, Custom game engines, Maya, PBR Rendering, VR, Leap Motion
- Other: Custom hardware development, Performance optimization, Game physics

## Project Highlights

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- **Jurassic Park Arcade** - Delivered a top-earning, on-rails shooter by leading a full engine transition, fine-tuning enemy pacing, and optimizing new motion hardware for unforgettable gameplay.
- **Cruis’n Blast (Arcade)** - Blended next-gen visuals with Raw Thrills’ signature racing feel, creating a high-energy, explosive racer that remains a top earner in a competitive market.
- **Cruis’n Blast (Nintendo Switch)** - Expanded the arcade hit with much more content, leading a full remote pivot to console development and delivering a fast, faithful experience praised for its fun gameplay & smooth performance.
- **Fast & Furious Arcade** - Delivered mission-driven gameplay and massive linked video wall setups, combining cinematic spectacle with cutting-edge hardware to dominate the arcade racing space.
- **Superbikes 3** - Rebuilt the series on Unity, introduced upgrade-driven replayability, and fine-tuned gameplay through player-focused testing to drive repeat play and maximize arcade revenue.
- **T-Rex Safari Adventure** - Created a seamless VR arcade experience blending hands-on dinosaur interaction with motion-platform immersion, engineered for reliable unattended operation.