

RICK NAEGELE

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PROFILE

Lead software engineer with 25+ years shipping games across pinball, slot machines, console, and mobile platforms. Specializes in high-performance C++ and full-cycle game development, from architecture through delivery. Proven track record leading teams at EA, Midway, WMS, and Stern Pinball to deliver complex, high-quality titles on time and on budget.

TECHNICAL SKILLS

Languages:	C++, C#, Java, Python, UNIX shell, sed, awk, XML, HTML
Methodologies:	OOP, Design Patterns, Agile / Scrum, Test Driven Development
Middleware:	DirectX, OpenGL, Unity, Godot, Cocos2d-x, XNA, Renderware
Platforms:	Win32/64, Linux, Android, iOS, XBOX, PS2, XBOX 360, PS3
IDE:	Visual Studio, VSCode, XCode, Visual Slick Edit
Tools:	Jira, Confluence, Git, Perforce, CVS, SVN, Photoshop, Premiere

PROFESSIONAL EXPERIENCE

STERN PINBALL, INC.

Lead Software Engineer

ELK GROVE VILLAGE, IL

July 2017 – Present

- Led a team of 3-6 software engineers in adding all required gameplay features.
- Implemented game rulesets in C++ to designer specifications.
- Created software for test fixtures that tested playfield mechanism durability.
- Assisted and mentored other Software Engineers on different projects.
- Lead Software Engineer for 6 complete pinball machine projects:

Iron Maiden: Legacy of the Beast (Linux platform) – TWIPY – Game of the Year 2018

Jurassic Park (Linux platform) – TWIPY – Game of the Year 2019

Avengers: Infinity Quest (Linux platform) – TWIPY – Best Rules 2020

Godzilla (Linux platform) – TWIPY – Game of the Year 2021

Jaws (Linux platform) – TWIPY – Game of the Year 2024

King Kong: Myth of Terror Island (Linux platform) – TWIPY – Best Rules 2025

WMS GAMING / SCIENTIFIC GAMES

Principal Software Engineer

CHICAGO, IL

January 2010 – July 2017

- Used MVC pattern to create games with deterministic math model reproducibility.
- Math model written must be able to replay award shows with 100% accurate history playback.
- Debugged applications for memory leaks for soak tests that last well over a week of constant play.
- Used a proprietary 3D engine as well as off the shelf Unity engine to create 3D bonus games.
- Analyzed and acted on packfile memory based on technical guidelines to keep games running at framerate throughout all game events where VRAM could be a bottleneck.
- Implemented code to smoothly move a DBOX motion chair to realistically simulate movement for a dynamic 3D ride shown on the video screen.
- Designed and implemented C++ game code for 6 complete slot machines including:

Willy Wonka (Linux / OpenGL platform) – Best performing slot machine for 2013

Mouse Trap (Linux / OpenGL platform) – High performing stepper slot machine

BeetleJuice (Linux / OpenGL platform) – Completed two months earlier than scheduled

Space Invaders (Windows / Unity platform) – Skill based game (first for Scientific Games)

JARDVARK STUDIOS (SIDE PROJECT)

Programmer

CHICAGO, IL

January 2012 – February 2015

The Mouth of Madness (iOS)

- Started a side project to develop a mobile game in addition to working a full time job.
- Wrote slashing game mechanic and scoring system for the game.
- Implemented many enemy behaviors using C++ in the Cocos2d-x engine.
- Created an xml based level file parser for the spawn order and difficulty of the game.

- Managed assets for all sprite atlases in the game to support 3 different resolutions.
- This game was downloaded more than 100,000 times and was reviewed on Pocket Gamer.

CHEWY SOFTWARE

Senior Software Engineer

CHICAGO, IL

January 2008 – December 2009

Way to Go! Bowling (PC - Windows)

- Investigated feasibility of low-cost 3D engines for possible use.
- Wrote accurate technical design documents to deliver to client.
- Created a proprietary game engine based on D3D and D3DX using the fixed function pipeline.
- Implemented all game play elements and achieved an accurate bowling simulation.
- Integrated 3rd party sound library and game play triggers for sounds.
- Wrote approximately 60% of the game's entire codebase.

ELECTRONIC ARTS

Software Engineer II

CHICAGO, IL

August 2005 – November 2007

Def Jam: ICON (XBOX 360, PS3)

- Implemented the camera system for Def Jam: ICON.
- Collaborated closely with art director to get the desired cinematography for the game.
- Created easily tunable camera logic and parameters to aid in fast iteration with art direction.
- Designed and implemented the cut scene cinematic pipeline for character / camera animations.
- Worked with cinematics animators to diagnose and solve animation problems in cut scenes.
- Mentored a new hire on the Def Jam camera system to be able to make productive contributions in a short time.
- Worked with animation engineers to solve animation related pipeline issues within EA's proprietary anim system.

Fight Night Round 3 (XBOX 360, PS2, XBOX)

- Implemented online stat tracking / reporting code.
- Integrated online game mode and UI screens with a shared online library.
- Ensured fulfillment of technical requirements checklists as well as EA guidelines.
- Managed the tight online memory budget for PS2 for the life of the project.

MIDWAY GAMES

Software Engineer

CHICAGO, IL

March 2003 – July 2005

Mortal Kombat: Deception (PS2, XBOX)

- Evaluated the feasibility of using the UIX plug-in for an XBOX Live screen solution.
- Ported XBOX Live screen functionality from MLB Slugfest to MK: Deception engine.
- Implemented XBOX Live voice chat and voice messaging.
- Ported PS2 screen control functionality from screen engine releases to the MK engine.
- Implemented localization support for XBOX Live screens.
- Ensured compliance with XBOX TCR of Voice Chat / Voice Messaging / Friend Requests / Game Invites.

NBA Ballers (PS2, XBOX)

- Implemented the TV Tournament and Rags to Riches game modes.
- Implemented the memory card (PS2) and hard drive (XBOX) saving / loading
- Set up an automated nightly user interface export and art build using Midway proprietary tools.

NuFX

Software Engineer

HOFFMAN ESTATES, IL

August 2000 - February 2003

NCAA March Madness 2002 & 2003 (PS2)

- Implemented the Dynasty game mode and UI screens.
- Helped implement Season game mode and UI screens.
- Adapted the NBA Live rookie generation code to generate new recruits for college dynasty mode.

EDUCATION

BS, COMPUTER SCIENCE

*Northern Illinois University
cum laude*

MAY 1999

DeKalb, IL