Matthew Davey

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Summary

A veteran game developer with over 17 years of experience in and around the games industry having shipped over 125 projects. Deep history with Unity, recognized as the go-to solutions provider for complex problems, both native and managed. Experience working with Unreal Engine at a core level and a contributor to the Unreal Engine codebase and other open-source projects.

Matthew holds positions on different educational institutions' advisory boards for game development-related programs and continues to produce industry-recognized open-source tools.

Matthew owns and operates dotBunny, a development studio in Peterborough, Ontario. dotBunny provides consultation and development support in the games industry and other sectors. In June 2016, Matthew founded the PTBO Game Jam, a not-for-profit event that engages the local community with the video game industry to form long-term relationships.

Experience

Principal Software Architect

Unity

Aug 2022 - Feb 2024 (1 year 7 months)

Work with executive leadership, internal R&D, product stakeholders, and external game studios on the vision and strategic development of Unity. Drive alignment on improving Unity by engaging with internal teams and developing novel technologies collaboratively or independently. Provide leadership and mentorship to the Emerging Technology organization.

• ET Technical Director on an unannounced PC / Console IP.
• Provide technical direction on internal projects and client engagements.
• Work with leadership in areas of performance evaluation and employee growth.
• NDA platform involvement.
• Create, maintain, and deliver bespoke versions of Unity.
• Developed and implemented cross-company coding standards with an early feedback loop.
• Design, develop, and ship features — most recently, Object.InstantiateAsync!
• Provide ad-hoc bug resolution throughout the Unity ecosystem.

aka IC9 Principal Engineer

Lead / Staff Software Developer

Unity

Sep 2020 - Aug 2022 (2 years)

Joined the small (but mighty) Advanced Technology Group inside Unity's then Professional Services division to explore creating novel technologies based on user needs and the team's industry experiences.

• Architect of the Engine Conversion Toolkit — Automated conversion of Unreal Engine 4 & 5 projects to Unity with live editing from UE.
• Helped implement and extend a Python-esque virtual machine inside the Unity runtime on all platforms.
• ET Technical Director on an unannounced PC / Console IP.
• Led small strike teams to resolve embattled service engagements in feature and optimization-related work.

aka IC8 Staff Engineer

Lead Console Engineer
inXile entertainment
Sep 2019 - Sep 2020 (1 year 1 month)
Primarily focused efforts on Wasteland 3 (Unity/C#), directing optimization and console development. Providing high-level engineering direction, planning, support, education, and mentorship.

Wasteland 3
• Designed and implemented managed update system.
• Refactor game systems into task/job-based solutions.
• Created best-practices for optimized rendering and gameplay systems.
• Collaboratively designed and developed an automated texture management system.
• Identified and corrected bottlenecks with Wwise implementation.
• Developed robust gameplay tooling for game designers.
• Constructed efficient build pipelines supporting multiple platforms.

Founder / Lead Engineer
dotBunny
Jun 2006 - Sep 2020 (14 years 4 months)
Manage and run day-to-day operations of a group of highly skilled industry contractors. dotBunny provides white-label professional services to a wide variety of clients in and around the games industry.

Company is resting.

Principal Engineer
OtherSide Entertainment
Dec 2018 - Aug 2019 (9 months)
Worked with multiple teams on numerous initiatives, including an Unannounced Project (UE4/C++) and System Shock 3 (Unity/C#). Providing high-level engineering direction, planning, support, education, mentorship, and staffing advice.

Thick As Thieves
• Implemented a best-practices custom Unreal Engine 4 build with UGS pipeline support.
• Supported art, design and development team throughout the transition process to Unreal.
• Designed and implemented a multi-game framework with automated testing (TDD).
• Collaboratively designed and developed unique and innovative cooperative multiplayer mechanics.
• Rapidly developed early gameplay prototype in Unity game engine.

System Shock 3
• Wwise [audio] integration development and support; including custom occlusion and obstruction system design with dynamic portal functionality.
• Environmental lighting and mesh renderer optimizations and support.
• Additional engineering tasking.

Miscellaneous
• Developed relations with vendors to support collaborative technology sharing.
• Designed and implemented a multi-stream multi-project perforce infrastructure.
• Designed and implemented a TeamCity CI build system.
• Implemented asset naming conventions and coding standards.
• Overhauled office network infrastructure to support future growth (UniFi).

Senior Engineer
OtherSide Entertainment
May 2018 - Dec 2018 (8 months)
Engaged originally to provide audio integration development and support. Responsibilities quickly expanded to refactoring and owning numerous systems on the project, transitioning into a senior role supporting the team as needed on Underworld Ascendant (Unity/C#).

Underworld Ascendant
• Designed and implemented a post-launch save game system.
• Implemented full world state persistency across all levels in the game.
• Created a dynamic lighting and systems streaming solution allowing for large singular levels.
• Lead performance/optimization strike team.
• Improved quest system/tooling to be more designer centric with improved flexibility and workflows.
• Optimized existing audio integration to prevent runtime hiccups.
• Developed robust tools for game designers.

Miscellaneous
• Developed a recommended frame budget for use with console and pc deployment targets.

Partial-Load Faculty, School of Trades & Technology
Fleming College
Sep 2017 - Jan 2018 (5 months)
Worked with a local post-secondary establishment to alleviate a staffing challenge. Collaboratively worked with the learning design support team, creating course content which was both engaging and relevant. Course load included Operating Systems Theory, Advanced Operating Systems and Hardware Interfacing.

COMP237 - Operating Systems Theory
• Prepared and delivered relevant modernized lecture materials to students.
• Designed and administered practical lab experiences focusing on hireable skillsets for students.
• Planned and developed course content to meet regulatory specifications while still focused on real-world experiences.

COMP500 - Advanced Operating Systems
• Administered practical labs.

• Worked with the administration on creating a system to mitigate plagiarism.

COMP551 - Hardware Interfacing
• Administered practical labs.
• Worked with the administration on creating a system to mitigate plagiarism.

Systems & Integration Engineer
inXile entertainment
May 2014 - Nov 2016 (2 years 7 months)
Initially engaged to provide audio integration development and support. Responsibilities rapidly expanded to encompass narrative and UI based systems as well as providing additional engineering solutions as needed on Torment: Tides of Numenera (Unity/C#).

Torment: Tides of Numenera
• Created a full-stack custom Wwise [audio] integration with realtime in-editor previewing not requiring PIE.
• Designed and implemented a modular UI system with cascading ownership retention.
• Designed and implemented an infinite text system allowing for unlimited narrative length.
• Render pipeline optimizations and development support.
• Asset database load-time optimizations.
• Optimizations and development support for console and PC deployment targets.

Integrations Engineer (Contract)
Aspyr Media
May 2016 - Jul 2016 (3 months)
Hired to create a custom audio integration for Wwise into an existing project with tight performance requirements. Seamless worked with the existing audio team to identify needs and provide solutions for them.

Canceled Project
• Wwise [audio] integration development and support.
• Designed and implemented a custom rapid callback system for frame-dependent sound adjustments.

Development Lead
QLine Solutions Inc.
Aug 2007 - Jun 2008 (11 months)
Hired to modernize an aging enterprise healthcare management solution, while providing direction, planning, and mentorship to existing staff. Designed and developed additional targeted software offerings, and positioned the company for future acquisitions.

QCARE
• Architected .NET version of the existing enterprise software solution.
• Designed and implemented a .NET common framework across multiple programs.
• Deployed asynchronous client/server operations and connectionless operations.
• Migrated legacy VB6 codebase to .NET code
• Developed migration plans for the existing customer base.
• Designed and developed a plugin structure to support additive modules (QTime).

• Designed and developed PIPEDA compliant mobile/PDA integration.

QTree
• Designed and developed plant growth management software collaboratively with farming community representatives.
• Implemented self-updating client-facing mobile applications with an offsite data warehouse.

Miscellaneous
• Implemented asset naming conventions and coding standards.

Software Developer
Best Buy Business
May 2007 - Oct 2007 (6 months)
Acquired Speakeasy in May of 2007. Continued to maintain existing development focused position. Worked with a broader client base in creating GDX based solutions for their needs. Responsible for integrating GDX technology within Best Buys' offerings.

• Designed and documented the next iteration of GDX systems.
• Produced extensive internal documentation of GDX infrastructure for knowledge transfer purposes.

Software Developer, Managed Services
Speakeasy
Jun 2004 - Apr 2007 (2 years 11 months)
Acquired GameDaemons division from ProHosting Inc. in June of 2004. Transitioned into a systems development role during purchase restructuring. Responsible for architecting and implementing managed systems based on previous GDX development work as well as onboarding new staff.

• Design and implementation of Visa CISP-certified web-based point of sale system and infrastructure.
• Worked with clients to white-label GDX infrastructure.
• Designed and implemented a cross-platform ticket monitoring application for engineers.
• Development of FileCloud

NexGen Development
ProHosting Inc.
Feb 2003 - Jun 2004 (1 year 5 months)
Acquired GameDaemons Inc. in February 2003. Worked with expanding team to identify workflow optimizations and automate network administration tasks. Continued to support the founder in day-to-day operations of the company, and provide support to rapidly expanding customer base.

• Liaison for numerous game studios as point-of-contact for development support.
• Developed web-based hardware management infrastructure (GDX) with an automated point of sale system.
• Sponsored numerous emerging e-sports events.

NexGen Development
GameDaemons Inc.

Jun 2002 - Feb 2003 (9 months)
As the companies first hire, was responsible for a variety of development tasks and supporting the increasing customer base. Worked directly with the founder to position the company for investment and future acquisitions.

• Worked with numerous game studios to optimize net code for online competitive play.
• Optimized operating systems at kernel level for game server runtimes.
• Developed a web-based reservation system with notification and reprioritization capabilities.
• Performed system administration related tasks across an internationally distributed network of high-performance servers.

Education

Trent University
2003 - 2007

Loyola Catholic Secondary School
1998 - 2002

St. Mark School
1988 - 1998

Licenses & Certifications

Unity Certified Developer - Unity
Issued Apr 2016 - Expires Apr 2018
2016029-11C404

Skills

ECS • Leadership • Mentoring • Game Development • C# • System Administration • C++ • Unity • Unreal Engine • System Architecture