

ANDREW AYE

Mobile: (949) 266-4467

LinkedIn: <http://www.linkedin.com/in/andrew-aye>

E-mail: andrew.aye@gmail.com

Web: <http://www.andrewaye.com>

CERTIFICATIONS

PMP (PMI), CHPSE(Supremus), CCSFP(HiTrust), CIPP/E (IAPP), CIPP/US (IAPP), CIPT (IAPP)

EDUCATION

MBA	Business Administration, Masters	Cornell University	Expected 2020
MBA	Business Administration, Masters	Queens University	Expected 2020
B.Math	Computer Science, Honors	University of Waterloo	2000
B.A.Sc.	Mechanical Engineering, Honors	University of Waterloo	2000
B.A.	Film, Fine Arts Honors	University of Waterloo	

PROFESSIONAL EXPERIENCE

MANAGEMENT

2017 - Present

Amazon [Seattle, WA]

Principal Software Engineering

Principal Engineer on the leadership team of NA Consumer, Consumables including:

- Programs: SNAP EBT, Prime Pantry, Parent Experience, Sampling, Consumable Innovation
- Amazon Retail: Health, Beauty, Core Consumables, Baby
- Businesses: Pillpack (pharmacy)

2015 - 2017

Microsoft [Redmond, WA]

Principal Software Engineering

• Organized program execution across eight studios around the globe

• Monitored five concurrent products each with 3+ sites of 30-70 engineers

• Participated in working group for Xbox One X development experience

• Managed and lead team to achieve ORI DE performance targets (60FPS) on PC and Xbox One

2014 - 2015

Development Manager

• Hired to lead expansion of studio for AAA production

• Managed a core team of eight people (back-end) and relationship with external client team

• Supervised transition of studio plan from established IP (Age of Empires) to new IP

• Supported team through studio closure due to change in Senior Leadership

2012 - 2014

Infinity Ward [Encino, CA]

Project Technical Director / Project Manager

• Managed a team of 70+ programmers to support game and engine development

• Responsible for project and engineering risk, schedule and feature list

• Set production project goals, schedules and milestones

• Coordinated with Executive Activision teams for simultaneous worldwide launch

2011 - 2011

Lead Engineer / Project Manager

• Supervised code teams across four studios during critical final stages of MW3 development

• Scheduled and managed IW code team to finalize PC SKU and console patches

• Organized submission process for simultaneous worldwide launch

• Coordinated with IW production and Executive Activision management teams

2010 - 2011

Microsoft [Redmond, WA]

Senior Developer

• Directed content changes to improve memory and performance.

- Work on issues in the Kinect platform code, collaborating with the platform team to fix issues

2007 – 2009

Obsidian Entertainment [Irvine, CA]

Lead Technical Engineer, CTG

- Managed and mentored a team of five people working in CTG
- Scheduled CTG’s feature roadmap (plan)
- Liaison with Art and Design to confirm requirements and completeness

2006 – 2007

Senior Programmer

- Negotiated with publisher (Atari) acceptable range of supported PC hardware

2003 – 2006

Terminal Reality [Dallas, TX]

Simulation Engineer

- Responsible for development and integration of physics engine and features
- Coordinated with three product teams on roll-out of engine features

2001 – 2002

Sunstorm Interactive [Indianapolis, IN]

Lead Programmer

- Managed a programming team of five people and out-sourced art team

PROFESSIONAL EXPERIENCE

INDIVIDUAL CONTRIBUTOR

2015 – 2017

Microsoft [Redmond, WA]

Principal Software Engineering

- Established quality and performance standards for five Xbox One X titles (4K HDR)
- Developed performance improvements for group's UE4 games (over 20ms on the GPU)
- Executed streaming performance improvements on Unity 5.3 for Ori DE (PC, Xbox One)
- Performed input control experiments and improvements for Quantum Break

2014 – 2015

Microsoft Game Studios

Development Manager

- Responsible for scale plan of back-end services for launch on iOS

2012 – 2014

Infinity Ward [Encino, CA]

Project Technical Director / Project Manager

- Collaborated with art leads to establish new process and pipeline for asset creation
- Directed and architected the next generation engine for CoD on PS4 / Xbox One / PC DX11
- Oversaw pioneering work on real time sub-division surfaces and displacement

2011 - 2011

Lead Engineer / Project Manager

- Reduced audio processing by 3.5 ms (out of a 16ms frame)
- Refactored effects system for additional concurrency (two to eight threads)
- Moved all effects processing to the SPU
- Optimized the general per frame updating of entities to save 2.5ms on average

2010 – 2011

Microsoft [Redmond, WA]

Senior Developer

- Executed improvements to reduce CPU time from 40ms+ to 32ms for 92% of game time
- Executed GPU optimizations to achieve target goal of 30 FPS (from 22 FPS)
- Responsible for fixing crash bugs improving MTBF from 10 minutes to 70+ hours

2007 - 2009

Obsidian Entertainment [Irvine, CA]

Lead Technical Engineer, CTG

- Architect and implementation lead for company’s new AAA engine code base
- Implemented the following major systems:
 - Cross-platform rendering system and render resource manager

- • Synchronization (Job) model used to maximize CPU saturation for engine execution
- • Asynchronous loading system for all level assets
- • Basic scene graph for frustum culling, per-object light lists and shadows
- • Base actor class
- • Havok integration. Abstracted interface to prevent future dependency
- • Visual effect system that allows for significant flexibility for the artist
- • SPU programs for skinning, memcopy replacement, shadow map filtering and debug text
- Ongoing refactoring to the engine to maintaining code quality and performance

2006 - 2007

Senior Programmer

- Analyzed and optimized engine to improve performance for a range of PC hardware.
- Refactored parts of rendering engine and shader code responsible for producing ill behavior, either in visual appearance or in execution time. (Render time went from 2FPS to 24-30FPS).
- Wrote a series of routines for constructing arbitrary walk surfaces based on a collection of objects (placeables) that had user defined walkable surfaces. Created a routine to validate face to face pathability that was used by the pathing system.
- Performed troubleshooting and firefighting for the shipping product.

2003 - 2006

Terminal Reality [Dallas, TX]

Simulation Engineer

- Integrated O.D.E. (open source physics solver) into the engine code base.
- Built primitive vs triangle-mesh routines to calculate penetration depth and surface normal
- Designed continuous collision detection for high-speed and/or small geometry
- Implemented a true cylinder collision primitive
- Improved constraint calculations for fidelity and realism for a low frequency updates
- Created a debugging visualization system.
- Refined collision calls for performance on PS2 console
- Tweaked capsule collisions to provide predictable, stable results for soft body simulation.

2001 - 2002

Sunstorm Interactive [Indianapolis, IN]

Lead Programmer

- Designed a data driven simulation system to allow for ease of customization and expandability
- Refined existing graphic engine for increased performance
- Built a specifically crafted physics simulation for Bridge Builder (truss structure simulation)
- Devised an API layer to facilitate game team's use of internal engine

PROFESSIONAL EXPERIENCE

OTHER

1994 - 1997

The Microsoft Network (MSN) [Internet]

Forum Manager

- Created an online community for people interested in role playing games for MSN.
- Managed a community team of fifteen people.
- Responsible for multiple message boards, online chat-based games and event organization.

1995 - 1997

Steve Jackson [Internet]

Game Designer

- Helped with the development and testing of the INWO: Subgenius.
- Official representative for the Illuminati: New World Order CRPG on MSN.

PROFESSIONAL EXPERIENCE

Co-Op (UNIVERSITY PROGRAM)

Programmer [1996]

Canadian Space Agency [Montreal, QC]

Implemented a simulation for testing a haptic device as a controller for the Canadian Arm.

Programmer [1995]

Cognos [Ottawa, ON]

Ported code base to UNIX Platforms (HPUX, DGUX, AIX, Solaris, SunOS)

Network Specialist [1995]

Royal Canadian Mounted Police [Ottawa, ON]

Engineered the RCMP PC Network for the Canadian Capital Region (Users: ~5000)

Programmer [1994] Royal Canadian Mounted Police [Ottawa, ON]

Developed an in-house program for reducing police-oriented paperwork

Research Assistant [1990] Atomic Energy Canada [Chalk River, ON]

Assisted in development of an aqueous gamma radiation probe

PROFESSIONAL AFFILIATIONS

International Association of Privacy Professionals (IAPP)

Project Management Institute (PMI)

Association for Computing Machinery (ACM)

Institute of Electrical and Electronics Engineers (IEEE)

PRODUCTS SHIPPED AND DEVELOPED

[2015 - 2017]

Shipped: Quantum Break (XB3, PC), Ori and the Blind Forest: DE (XB3, PC), Recore (XB3, PC)

Development: Crackdown 3 (XB3, PC), State of Decay 2 (XB3, PC), Super Lucky's Tale (XB3, PC)

[2014 - 2015]

Shipped: Age of Empires: Castle Siege [iOS, Windows Phone, PC]

[2012 - 2014]

Shipped: Call of Duty: Ghosts (XB2, PS3, XB3, PS4, PC)

[2011 - 2011]

Shipped: Call of Duty: Modern Warfare 3 (XB2, PS3, PC)

[2010 - 2011]

Shipped: Kinect Adventures (XB2)

[2007 - 2009]

Shipped: Alpha Protocol (XB2, PS3), Dungeon Siege 3 (XB2, PS3)

[2006 - 2007]

Shipped: Neverwinter Night 2 (PC)

[2003 - 2006]

Shipped: Bloodrayne 2 (PC, XB1, PS2), Aeon Flux (XB1, PS2), Spy Hunter 3 (XB1, PS2)

[2001 - 2002]

Shipped: Bridge Builder (PC), Mahjong (PC), Super Ball (PC)

Development: Airport Tycoon II (PC)