

John McCann

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John McCann is an esteemed executive and technologist with a proven track record of delivering highly scalable, complex interactive experiences that delight customers and drive business value. John is seeking a **career pivot** to transition into a hands-on, technical role as an individual contributor or frontline manager in the entertainment, gaming, or computer graphics industry.

Comcast – 2011 to Present

Vice President, Connected Living Technology | Philadelphia, PA

Detail oriented executive who oversees an organization of 400 engineers with a \$90 million budget building Comcast's flagship Wi-Fi and home security products.

Xfinity xFi

- Responsible for building Comcast's cloud-based Wi-Fi product that provides 18 million customers access to Wi-Fi management, parental controls and advanced security features.
- Architected and delivered an engineering strategy that transformed a scattershot collection of siloed services into a cohesive, converged microservices offering that embraces serverless, containerized and dynamically scalable workloads.
- Led cost optimization efforts that resulted in over \$3 million in annual cost reduction through instance right-sizing, elimination of unnecessary software licenses, consolidation of operational visibility tools, increased use of lambda functions and adoption of auto-scaling groups.
- Grew engagement of the mobile app by 200% to 2 million weekly active users while increasing the App Store rating to 4.4.

Xfinity Home

- Oversees development, test and operations of Comcast's home security product including the mobile app, web experience, life safety services, IoT features and 24/7 camera recording platform.
- Spearheaded the development of a digital transformation of mission critical life safety services from a legacy monolith to cloud native microservices.
- Orchestrated a cloud migration of the home security platform components from an on-premise private data center to the public cloud with zero customer outage time.
- Led the team building a low-latency IoT control and automation platform including integrations with dozens of Zigbee and Wi-Fi controlled lights, thermostats, sensors, door locks and cameras.
- Maintained 99.99% uptime of alarm delivery services while supporting 1.4 million customers.

Executive Director, Software Development | Philadelphia, PA

Xfinity X1

- Directed a team of 60 software developers responsible for building the cloud-based user interface that powers Xfinity X1, the Emmy Award winning video product that runs on tens of millions of connected set-top boxes in the US and Canada.
- Scaled X1 from initial market trials to the largest cloud-based cable video platform on the planet, servicing residential and commercial lines of business for Comcast Xfinity, Cox Contour, Shaw BlueSky TV and Vidéotron Helix TV.
- Architected a hybrid public/private cloud deployment strategy that optimized for time to market and embraced a heterogeneous infrastructure landscape.
- Authored the protocol specification used for communication between X1 set-top boxes and the services that drive the user interface, and coded the client and server implementations of the protocol.
- Achieved 99.99% uptime on more than ten billion monthly page views.
- Managed a \$15 million labor budget and \$5 million public cloud budget.

IndustryNext – 2005 to 2011

Director of Development | New York, NY

Managed the engineering department of a software services company that completed over 60 software development projects for a variety of companies in the media and entertainment space.

NBC Direct

- Developed the playback experience for streaming and downloadable NBC video content.
- Led development of the team that integrated an advertising engine used to surface interactive ads from DART and YuMe networks.
- Built the download manager responsible for controlling transfers of HD quality videos over a P2P network.
- Served as lead architect responsible for overseeing development of all software components.
- Software stack: Flash, DHTML and JavaScript for the presentation layer, business logic written in JavaScript and Flash, browser plug-ins and installer written in C++.

AOL Hi-Q Video

- Integrated delivery and playback of high-quality video assets into the AOL Video portal.
- Enabled further monetization of AOL's extensive library of videos by incorporating both rental and purchase payment models.
- Extended the reach of AOL Video content by providing deep integration with Media Center PCs and Intel Viiv™ compliant extender devices.

- Served as lead architect responsible for overseeing design and development of the client application, portal integration, extender device support and downloadable installer.
- Software stack: DHTML presentation layer, business logic written in JavaScript, downloadable installer built in C++.

AOL Media Center Experience for Windows

- Designed and built a Windows Media Center application that gives users access to AOL Video, Radio and Pictures content in the Windows Media Center environment.
- Delivered Flash video and Windows Media video content in an integrated video consumption experience that accepts user input from a remote control, mouse or keyboard.
- Served as technical architect responsible for managing the development, QA and deployment cycles of the project.
- Directed the team of engineers responsible for coding the application and coordinated development with the AOL engineering team to integrate with AOL web services.
- Created and maintained the Technical Requirements Document.
- Software stack: Windows Presentation Foundation (WPF) / XAML for presentation layer, application logic implemented in C# and C++.

Viewpoint Corporation – 2002 to 2005

Lead Software Engineer | New York, NY

Viewpoint Toolbar

- Developed a toolbar for Internet Explorer that allows convenient web search and bookmarking functionality.
- Created an advanced skinning engine for dynamic skin switching and sponsored co-branding opportunities.
- Built Browser Helper Object for sophisticated integration with the user's web browsing experience.
- Developed customized MSHTML hosting component which displays promotional web content.
- Software stack: C++, COM, ATL and MSHTML

Creative Innovator

- Architected an advanced internet ad serving platform which delivers rich media marketing content to millions of unique users.
- Created a sophisticated tracking technology that provides advertisers unique insight into their online marketing strategies.
- Engineered a web application that provides advertising agencies tools for creating and managing online advertising campaigns.
- Designed and developed the technology used to deliver and track rich 3D media content using the Viewpoint Media Player.
- Software stack: JavaScript and DHTML for presentation layer, ASP.NET (C#), XSL and J2EE for server application logic.

Personal Projects

OptiX Ray Tracer and Path Tracer

johnmccann.me/pathtracer

- A fully functional path tracer written in C++ using the NVIDIA OptiX ray tracing engine capable of demonstrating a variety of rendering techniques including Monte Carlo estimation and multiple importance sampling.
- Supports cosine and BRDF importance sampling, and includes implementations of modified Phong and GGX BRDFs.
- Written in C++ using NVIDIA OptiX 7.1, NVIDIA CUDA Toolkit and Win32.

Lord Mayor

johnmccann.me/lordmayor

- A real-time strategy game with a vintage aesthetic that plays like a cross between a puzzler and a city builder.
- Successfully promoted through the Steam Greenlight process and available for purchase on the Steam Store.
- Written in C# using Unity.

DCPU-IDE

dcpu-ide.com

- An Integrated Development Environment for developing software for the fictitious DCPU-16 processor, a processor architecture developed for the defunct video game 0x10c.
- Written in JavaScript.

h1tchr

h1tchr.com

- A website that maintains a graph of musical relationships and allows users assemble a web of songs that are related to each other by similar sonic or lyrical qualities.
- Written in JavaScript and Java, backed by a Neo4j graph database.

Johns Hopkins University – 1997 to 2001

BS in Computer Engineering

Minor in Entrepreneurship and Business Management

UC San Diego – 2020

Certificate of Achievement

- CSE 167x: Computer Graphics
- CSE 168: Computer Graphics II