Eric Richards

Engineering Manager - I'm Hiring

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Summary

Careers at Axon: https://jobs.lever.co/axon

Axon's mission is to protect life. Axon products focus on reducing social conflict, obsoleting the bullet, and accelerating truth and justice. If that resonates with you, visit the above Lever site.

I am responsible for Client Engineering, representing iOS, Android, and desktop experiences across a number of products that ensure law enforcement can collect, review, and upload evidence.

Before Axon, I was a software lead within the Windows Holographic team on the HoloLens product, delivering the mixed reality photo and video capture experience.

Previously I lead a team adding key features to the built-in Windows apps like Mail, Calendar, and People.

In addition to the Windows built in applications, I've worked on the Windows Photo Application, Windows Live Photo Gallery, Microsoft Office InfoPath (2003, 2003 SP1, and 2007) and the larger product that InfoPath was derived from, NetDocs, where I learned a great deal about technologies like DHTML, XML, XSLT, COM, ATL, JavaScript, and IE's engine (Trident).

Before Microsoft I worked at Intel Supercomputers on software tools for research scientists (esp. the graphical parallel debugger, XIPD - written in C++ for the X Windows System). Before Intel I worked for a startup called EPOS, mainly on the software system supporting their plastics injection monitoring products.

Specialties: Team skills, development technical leadership, architectural review, project management, people management, team leadership.

Technical skills: C++11, C++, C, Java, Python, PPL/Promises, XAML, COM, HTML5, CSS3, WinRT, XML, JavaScript, AJAX / XMLHttpRequest, Debugging, Perl.

Hobby: Arduino! I love prototyping with the Arduino, including the Uno, Yun, Esplora, Adafruit Flora +
Trinket + Gemma + Huzzah (ESP8266). Hooking them up to the internet for my own IoT is great fun.
I get some Raspberry Pi in, too, but it's the Arduino and the energy around it that I love most.

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Experience

Client Software Engineering Manager at Axon
October 2017 - Present

Engineering Manager for a broad spectrum of iOS, Android, and desktop applications that allow law
enforcement to collect, review, and submit evidence collected from the Axon body cameras. This
includes products such as Axon Capture, Axon View, Axon View XL, and Evidence Sync.

Lead Software Development Engineer on Sabbatical
July 2016 - October 2017 (1 year 4 months)

I enjoyed the good fortune of a Radical Sabbatical with the focus of exploring fantastic technology
emerging beyond Microsoft, digging deeper into management and business philosophies, and
reconnecting with this lovely area.

Principal Software Development Engineer Lead at Microsoft
November 2013 - July 2016 (2 years 9 months)

I led a small, agile software team to build from the ground up the core augmented reality / mixed
reality recording experience for Microsoft HoloLens (recording videos and photos of the mixed
reality holographic experience, plus being able to broadcast a live stream). This was done on
constantly changing hardware (prototype through iterations to shipping hardware) within an ever
changing operating system and platform environment.

Our small team also delivered a holographic 3D photos application for viewing photos and videos
and pinning them around the user's environment to create their own art museum experience.

Principal Software Development Engineer Lead at Microsoft
February 2012 - October 2013 (1 year 9 months)

Software Development Lead: lead the team that added great features to the Windows 8.1 Mail,
Calendar, and People Apps, including the revised Mail folder view to allow organization of your
mail around people that matter most to you.

Previously: shipped the People application experience for Windows 8. I joined the team mid-
development given the opportunity for broader technical ownership and ensured that the final
milestones of work resulted in a high-quality, performant WWA application that is based on HTML5/
CSS3 and JavaScript upon the WinRT modern platform. Like the Photos application, the People

application is one of the core out-of-box applications in Windows 8 and provides core services to all other applications like a contact picker and sharing to social networks.

Principal Software Development Lead at Microsoft
October 2010 - January 2012 (1 year 4 months)

Software Development Lead: I worked on the initial implementation of the Windows Store Application (née Metro) for the Windows 8 out-of-box Photo Experience. This required dynamic team coordination and scheduling given that development was against a new, emerging platform (WinRT, WWA, Internet Explorer 10 HTML5 / CSS3). The application itself is hybrid: HTML5 / CSS3 for presentation, JavaScript for user interaction, and C++ for business logic and database. My team's core responsibility was for the one-up view of a photo, hooking up to external devices for playing slideshows, and the photo import experience.

Principal Software Development Lead at Microsoft
February 2007 - October 2010 (3 years 9 months)

Software Development Lead: Working in Windows Live on the Windows Live Photo Gallery team was a perfect match for my passion of hooking up the power of client software running on a desktop with web services. In addition to initially publishing to Live Spaces, we also publish photos to flickr and to Facebook (and videos to YouTube). My team was responsible for a good bit of the user-interface facing features in Photo Gallery and the integration of Microsoft Research facial recognition and tagging into the product. I was a strong advocate of batch face tagging for quick progress and ensured this made it into the final product at high quality. My team also continued working with Microsoft Research for the integration of such features as Photo Fuse (merging the best of several pictures into one) and Auto-Collage. Photo Gallery is a staggeringly large C++ application for Windows.

Principal Software Development Lead of Leads at Microsoft
June 2001 - January 2007 (5 years 8 months)

Software Development Lead of Leads: Microsoft Office InfoPath is derived from a small aspect of NetDocs - databound XML (backed by XSD) rendered in HTML for form editing. My main responsibility was for the team that created the controls instantiated within the user designed forms, dealing both the with design-mode aspect of the controls in the forms and their run-time behaviors. Like NetDocs, this was heavily C++ and COM utilizing Microsoft's IE Trident technology (especially behaviors) for the presentation & edit layer.

Software Development Lead, Software Development Engineer at Microsoft
November 1997 - June 2001 (3 years 8 months)

Software Development Lead, Software Development Engineer: NetDocs was an ambitious software-as-a-service initiative at Microsoft that had an HTML-based universal canvas for rendering data and replicated applications and data from servers to local machines. I was responsible for the team that delivered the virtualized collection views for the product, utilized for

the inbox, calendar, and contacts views at the core of the application. I was also responsible for the XSLT engine that transformed XML into dynamic, data-bound HTML and was an essential component of the platform. Everything was COM/C++ based and heavily asynchronous (probably, until recently, the most asynchronous application that I've ever worked on).

Software Developer at Intel
June 1992 - October 1997 (5 years 5 months)

I worked in Intel's Supercomputer Systems Division (SSD, later renamed Server Systems Division) on the programmer's toolset, specifically on the graphical debugger XIPD, both for the Paragon and the Intel TFlops machine. This was an X Windows System based application that, in its final iteration, compiled for both the TFlops machine (to run remotely) and a Sun workstation (connecting to a debugging engine through hand-crafted RPCs).

I also worked on some of the various profiling tools, in addition to writing a Perl script to attempt post-mortem analysis of partially crashed systems. While at Intel in 1993 I discovered the World Wide Web and helped with the initial Intel presence on the web (and, in those days before firewalls, setup matrix.ssd.intel.com as an early web server).

Grad Student at Auburn University
1989 - 1992 (4 years)

Focus was on user interface design and implementation, understanding the technology for implementation and user cognition and physiology. Blessed by having a computer lab full of donated Sun Micro workstations to jam into the late hours with. Thesis was on the design and implementation of a language and compiler, hc, used to express platform-independent UI intent and generate C++ for Macintosh and the X Window System, using multiple inheritance to mix UI controls with their platform implementation specifics.

As a Grad Student, I also worked on a project for dynamic path execution for software testing of NASA software, Intel Supercomputing application development, and taught a lab on the C language and developing on UNIX (for which I wrote a good bit of original lab material).

Software Developer at EPOS
June 1987 - August 1989 (2 years 3 months)

Software client development at EPOS in C on the QNX operating system (after doing some DOS PC-based contract work). I worked on the EPOS plastics injection monitoring system, primarily on the user interface library (kind of object oriented via a bunch of function pointers). I learned a great deal quickly going out into the field for Ethyl Corporation and installing systems in a variety of places (usually, I was the software guy configuring the plant's setup, though I did drill into a machine or two for mounting transducers).

Education

Auburn University

Masters Computer Science, Computer Science, Engineering, 1989 - 1992

Activities and Societies: Member of the local ACM chapter and the physics honor society.

Auburn University

Bachelor Computer Engineering, Computer Science, Engineering, 1983 - 1987

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