

Arizona Claude Edwards



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Competencies

C++	10		★★★★★	STL, ATL, MFC, also: FCL, C++/CLI, etc.
DotNet	8		★★★★★	Web and desktop using C#, VB.Net, C++/CLI
Python	3		★★★★☆	DotNet Interop, multiprocessing, Robot Testing, etc.
Java	2		★★★★☆	Android, JNI, Web-Applets, Tomcat
Fortran	1		★★★☆☆	Financial software maintenance
PHP	1		★★★☆☆	Website maintenance, basic sites
Databases	15		★★★★★	Design, DDL, data access, SQL, etc.
IPTV	5		★★★★☆	VHO Integration, set-top-box, over-the-top, etc.
TCP/IP	5		★★★★☆	SSH, SSL/TLS; WS_FTP - fastest FTP client at the time
Windows	26		★★★★★	Since Windows 3.0, Internals, GDI, COM, etc.
Web	10		★★★★★	ASP.Net, HTML, JavaScript, CSS, JSP etc.
Unix	5		★★★★☆	AIX, Solaris, Linux; ksh, also: bash

Over the years I have gained significant experience in multiple technologies and industries. I have a range of levels of competency and experience, so I have done my best above to accurately estimate and depict for each skill:

◇ years of accumulated experience; ◇ usage over time; ◇ overall self rating.

I look forward to the opportunity to prove myself in interviews and via online tests, and to contributing positively to your organization.

Disciplines

Multi-Sector:	Experience in Financial, Healthcare, Education, Defense, Internet, TV, and other industries.
Travel/Consulting:	Experience traveling for trade shows, client meetings, and internal meetings.
Team Lead:	Experience and recognition as team lead, principal developer, guide and mentor.
low level coding:	Coding at the bit level, endianness, protocols, layouts, MIL-STD-1553, Arduino, etc.

Education

BSc. in Computer Science with Math Minor
Georgia State University

References

[linkedin.com/in/arizona-edwards#recommendations](https://www.linkedin.com/in/arizona-edwards#recommendations)
[Latest Versions](#)

Work Experience

Bloomberg
Senior Software Engineer

Jun 2013 - Jun 2016

I programmed primarily in C++, SQL and Python along with Fortran, JavaScript and shell languages, in the areas of data quality control, data migration, client data entitlements, distributed data gathering and delivery pipeline. Data License is a \$750M/yr enterprise platform that delivers collated Bloomberg data to enterprise clients as files.

I also did user interface development for the Bloomberg Terminal, primarily in JavaScript.

At times I was also in rotation as a support on-call, with the possibility of being somewhat always on-call in exigent circumstances, or if the scheduled on-call was not reachable.

Highlights:

- I was the principal software engineer on the project to migrate the product we deliver to the Philadelphia Federal Reserve from an older custom infrastructure into the main Data License infrastructure.
 - I was also the principal software engineer in projects to provide the Fed with sample data to answer RFPs for new products under my team's responsibility.
- I was one of the key developers on a project migrating several classes of mortgage securities from Bloomberg Generic pricing (BGN) to the more accurate Bloomberg Valuation (BVAL) pricing.
- I developed efficient functionality to configure and manage customer entitlement to orthogonal categories of both securities and fields.

Georgia Tech Research Institute (GTRI)
Contract Programmer

2012 Apr - 2013 Jun

I programmed primarily in C++/CLI, C++, Python and C# to develop several successful electronic warfare products for which the revenue to GTRI was in the tens of millions of dollars. I directed and coached the two student interns on my project, and indirectly provided additional mentoring to other student interns.

Highlights:

- I developed an application to monitor and control communications between devices over a MILSTD1553 serial interface and display real-time visualizations of the traffic. The application could act as bus-master or slave, record and playback traffic, and playback sensor input. My object oriented model, code structure and the reflection capabilities of Managed C++ allowed an intuitive but very rich UI with visual elements ranging from simulations of the aircraft control panel down to raw data, with pop-ups and mouse overs revealing data all the way down to individual bits and flags.
- I developed and enhanced software to control a PCI card that captured multi-channel PIR data from optical sensors and played back recorded sequences to the central processor during testing.
- I designed and developed an AN/APR-39 (Radar Warning System) simulator that could communicate with a physical AN/AAR-47 (Laser Warning System) and emulate and test the protocols for startup, version detection, and control/display integration for aircraft with both systems.
- I designed, prototyped, and programmed an Arduino based device on a powered breadboard in a nicely enclosed package with RS485 over USB connectivity and external power.

Alcatel-Lucent Software Architect/Solution Line Manager	2009 May - 2012 Mar
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I developed prototypes and demos of Mediaroom set-top-box applications and worked on large IPTV Application architecture projects primarily in ASP.Net and C#.

As a solution line manager in the Multimedia Integration Division, I also performed a broad range of software development activities including software architecture, visual design, technology evaluation, business development, demos, trade shows, training, acceptance testing, and deployment.

Highlights

- Created prototypes and demos
 - ▶ For the set-top-box using SQL, C#, ASP.Net, MRML and Javascript, REST and OAuth
 - Pandora, Movie Times, Instant Messaging, Netflix Queue Manager
 - ▶ For the set-top-box using LAMP
 - Self Service Application
 - ▶ For Android using Java, SQL, XML
 - Remote DVR including QuickPlay adaptive-rate streaming using AuthenTech DRM.
 - ▶ For Broadcaster Backend web-based management, using ASP.Net, C#, SQL
 - Multisite mediaroom web management with federated authentication.
- Pre-sales engineering, demos and trade shows.
 - ▶ I setup and supported demos at TELCO-TV and other trade shows USA and worldwide.
 - ▶ I setup and supported demos and user acceptance tests at clients throughout the USA.
- Development Team Liaison.
 - ▶ Local liaison to the development teams in Poland, England, Singapore and India.
 - ▶ Included travel to Poland, England, Singapore and India.
- Deployment and support
 - ▶ I deployed our hardware and software in broadcaster VHOs around the USA.
 - This included installation and configuration of: blades, SANs, Fibre and network connections, Multi-Path I/O, Redundant NICs, IP failover, micro-subnets, Linux, Windows domains and trust, Windows failover, SQL Server failover, SSL appliances, and custom software in various hardware, VM and network architectures.
 - ▶ I maintained my own Mediaroom lab with an HP-ML170 running Microsoft Mediaroom Server connected to several set-top-boxes throughout the office. I maintained current versions of production and deployed software for testing and troubleshooting.
 - Software titles included: Weather, Caller ID/Call Handling, Visual Voicemail, Remote DVR (RDVR), Yellow Pages, Flickr, A collection of casual games, applications from third party partners.

AT&T Contract Programmer	2007 Jan 2008 Dec
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I developed and enhanced prototypes of on-screen, customer-facing, interactive IPTV applications that run directly on the Set-Top-Box. Technologies used include C#, ASP.NET, Oracle, SQL, JavaScript, C++, DirectShow, and the Windows Media SDKs.

Highlights:

- I developed the Preferences section of the U-Verse application, including the database design, database programming, and capacity planning. This section of the application stores the user's home city, favorite cities, and other user specific preferences. I used C#, ASP.Net, Oracle, PL/SQL, and JavaScript with Ajax.
- As part of a team, I collaborated closely with our information architects and other developers to create solutions that address the challenges of television applications. The key difficulties we mitigated were:
 - ▶ Entering text and navigating a UI with a hand-held remote.
 - ▶ Visual display elements that looked acceptable on a wide variety of display technologies and qualities.
 - ▶ The user's implicit expectation of the same level of reliability from integrated apps as their television service, much higher than expected from Internet service, or SmartTV apps.

Agile Technologies LLC Contract Programmer	2006 Jan 2006 Mar (remote/part time)
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In C++, I created an Active-X control in a single, signed, self-registering DLL to allow the J2EE application that Agile had developed for PackageXpress to communicate with the retrograde hardware at the retail stations.

The ticket agents used Windows 98 workstations with IE6 attached to a luggage scale, a coupon printer, a regular printer, and a debit card PIN pad, along with other peripherals. The multi-threaded Active-X control maintained the connections with the luggage scale and printers via the parallel ports and the debit PIN pad over the serial port.

I developed the web harness and the documentation in HTML and JavaScript.

NextGen Healthcare Information Systems Consultant	2005 Jan 2006 Aug
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I developed custom solutions to help several new customers convert their health care and accounting data from other software formats into NextGen formats. I wrote programs to generate various regulatory reports from customer databases. I programmed extensively in Excel using both macros and VBA, as well DotNet Interop for Microsoft Office using C# and VB.Net. I travelled to client sites to observe workflow, determine requirements, and demonstrate solutions.

Projects included working with HIPAA Compliancy, HL7, SQL, XML, Microsoft VBA, SQL Server, MSMQ, Microsoft Office, Crystal Reports and Infragistics.

taxslayer.com (as Rhodes Financial Services) Senior Developer	2003 Sep 2004 Nov
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I worked primarily on parts of www.taxslayer.com, the company's online filing website using VB.NET, ASP.NET and SQL Server. I wrote code to dynamically generate the web forms required for each state from metadata about each state's tax forms. Dynamically generated controls that maintain ViewState, that respond to client side and post back events, that persist data according to schema and metadata, and that validate data both client side and server side required an in depth knowledge of the ASPX page lifecycle and post back data.

I wrote auxiliary processes and services in C# using MSMQ, XML, and Exchange.

I provided phone support to customers during tax season. In addition to researching software glitches and answering questions about operating the software, I learned the answers to more common tax questions on the job and had access to tax experts for more serious questions.

Ipswitch

Principal Software Developer

1999 Mar 2003 Sep

I worked on several versions of WS_FTP, the most sold FTP client in the world. In particular, I was responsible for and developed the FTP engine for version 7, which has remained mostly in place to date. WS_FTP included extensive work in sockets, TCP/IP, FTP, Windows, and C++.

Highlights:

- My goal for version 7 was to make my FTP engine the fastest in the world. I achieved that goal against all known products available for comparison.
- To implement a rich modern FTP client, I had to understand and implement many Internet RFCs, and overcome many challenges endemic to the protocol in a modern environment, such as firewalls, encryption, NAT, non-routable addresses, and Port and Passive callbacks.
- I delved deeply into the Windows SDK, GDI; GUI; shell integration; resource management; internationalization; threading; thunking; algorithms; memory usage; performance; persistence; COM; ATL; SSL; SSH; PKI; digital signatures; key exchange; encryption, and secure sessions.
- I helped to maintain and administer test environments of FTP and SSH servers on Windows and Linux.
- As a principal developer, I travelled to and participated in company design and architecture meetings, as well as product feature and strategy meetings.