THOMAS ANDREW REICH JR.

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EDUCATION

THE JOHNS HOPKINS UNIVERSITY   May 2009
Master of Science, Computer Science; Focus in Software Engineering.   GPA: 4.0

UNIVERSITY OF MARYLAND, BALTIMORE COUNTY   May 2006
Bachelor of Science, Computer Science; Minor in Mathematics & Statistics.   GPA: 3.84

PROFESSIONAL EXPERIENCE

PRINCIPAL SOFTWARE ENGINEER   January 2015 - Present
Microsoft Corporation   Elkridge, MD

- Member of small development team tasked with building mission-critical software solutions utilizing C#, C/C++, .NET, ASP.NET MVC & WebAPI, Blazor, PowerShell, Angular.js, SQL Server (mssql), Hyper-V, VMware vSphere, Visual Studio, Windows Server, Perl, Team Foundation Server (TFS) / Azure DevOps and various other technologies to perform mission-critical tasks for the Federal Government.
- Obtained Microsoft Certified Solutions Developer (MCSD) certification and produced training materials to assist others preparing for the exams. Presented these materials internally and to a public-facing audience.
- Led week-long in-person training workshops on Microsoft Agile/Scrum methods to groups of 30-40 employees.
- Obtained various Microsoft Azure Cloud Development and Infrastructure certifications necessary for assisting customers in cloud development and migration efforts.

ADJUNCT FACULTY   July 2016 – January 2017
University of Maryland, Baltimore County   Baltimore, MD

- Instructed undergraduate-level Computer Science course on C Programming and Problem Solving to a full section of 40 students. Topics include basic use of the C programming language, algorithm design and development, and basic Linux & Command Line usage.

SOFTWARE ARCHITECT   September 2010 – December 2014
Next Century Corporation   Columbia, MD

- Assisted in the design, implementation, deployment, and maintenance of system tasked with providing 24/7/365 access to a mission-critical record store. Relevant data was stored and processed in an Oracle 11g database, with access provided via Java Web Services and a front-end composed of a mix of traditional HTML 4, YUI, and JQuery. Participated in development of all aspects of system, from back-end web services to front-end user interfaces. Worked closely with the integration test team to ensure test and deployment procedures remained accurate and relevant. Fielded support calls and feature requests from system end-users and integrated feedback into future system updates.
- Key developer on a small pilot team tasked with developing a system to calculate real-time mathematical models on time-series data by leveraging Apache Hadoop and Accumulo. Data was stored in a traditional relational database, then augmented with Elasticsearch for near instant search capabilities. Designed and implemented data repositories and associated Java Web Services responsible for creating, performing, and interpreting complex queries efficiently on hundreds of gigabytes of data.
- Researched data storage, extraction, and reporting techniques for new mission-critical system. Analyzed several key-value, document, and relational storage systems by producing custom code designed to load test and capture statistics on key parameters. Prototyped customized security middleware designed to integrate Public-Key Infrastructure (PKI) and other customer-specific security measures in a straightforward manner.
- Member of backend services development team on production-deployed system serving thousands of simultaneous daily users. Leveraged Netty to create web services and web sockets that ingest from and provide data to users near real-time. Utilized MongoDB to create a cache of user action requests, handling millions of document upserts per day.

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SENIOR SOFTWARE ENGINEER   April 2009 – September 2010
Lockheed Martin, Integrated Systems and Global Solutions   Greenbelt, MD

- IPT Lead for the UK Census Data Interface Integrated Product Team. Conducted weekly customer meetings, provided status to Lockheed Martin management and UK Government officials, and led a team of developers to integrate new data interfaces into the Lockheed Martin census system.
- Led team of developers tasked with designing and implementing .NET application responsible for producing 33,000+ Microfilm rolls consisting of all paper and internet responses captured during 2011 Census activities for England, Wales, and Northern Ireland.
- Worked directly with Kodak engineers to design and test a .NET interface for the Kodak i9600 Series Microfilm Archive Writer.
- Co-developed and implemented automated SFTP-based data interface using .NET technologies to automatically transfer, receive, process and record binary file transfers. Developed software serves as primary external interface for UK Census system.

SOFTWARE ENGINEER   June 2007 - April 2009
Lockheed Martin, Integrated Systems and Solutions   Greenbelt, MD

- Designed and co-implemented a rules engine to produce C# source code based on a set of rules designated using a GUI application. Rules were stored in the form of XML configuration files and dynamically translated, built and compiled at run time, producing nearly no tradeoff between application flexibility and processing speed.
- Coordinated with Lockheed Martin Census Data Quality group to examine several third-party software solutions available to analyze extracted data quality information. Wrote custom software to integrate chosen application into pre-existing software subsystems.
- Worked with a small group of developers and Systems Engineers on an internal research and development project focused on gathering terabytes of information from disparate sources and integrating it into a single searchable database.
- Led a group consisting of several Census Bureau employees to produce a 100+ page document outlining processing rules for preliminary group quarters validation activities. Leadership activities directly led to a formal letter of commendation from the Census Bureau.

SOFTWARE ENGINEER ASSOCIATE   June 2006 – June 2007
Lockheed Martin, Transportation and Security Solutions   Greenbelt, MD

- Worked as integral member of a small team tasked with producing a subsystem to receive data from the Census Bureau, gather necessary information from the Lockheed Martin Census processing system, package the data in an agreed format, and send it to a third party responsible for performing follow-up services via telephone. Produced relevant documents and source code reviewed using standard CMMI Level 5 processes.
- Designed and implemented core library providing standardized IBM WebSphere MQ connectivity to both .NET and Java-based applications. The developed library was used by multiple mission-critical components in the Lockheed Martin census data processing system.
- Ported several legacy applications from MFC C++ to C# using both native .NET libraries and, where necessary, Win32 API invocations.
- Ported several common C# libraries to Java for use on specialized AIX Power systems. Common libraries across operating systems and programming environments allowed for future rapid development of components in both Windows and UNIX.

SYSTEM ADMINISTRATOR   Summer 2004, 2005, 2006
AJ Stationers, Inc.   Baltimore, MD

- Configured and maintained an e-mail, firewall, and file server using Red Hat Linux 9.0. Maintained Microsoft Windows 2000 Web Server. Redesigned and deployed AJStationers.com.

JUNIOR SOFTWARE DEVELOPER   Summer 1999
Promonet, Inc.   Portland, ME

- Created, prepared, and implemented code segments in Microsoft Visual Basic 6 and JavaScript.

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ADDITIONAL RELEVANT EXPERIENCE

PRESIDENT & CEO   April 2011 – December 2021
Prodigusoft, LLC   Columbia, MD
- Formed in April 2011 as a vehicle for personal development efforts, including those outlined below.

MOBILE/TOUCH APPLICATIONS
- Created and developed *Collection Keeper Pro* for Windows, Android, and iOS, available in the Windows Store, Google Play Store, and Apple App Store. The application utilizes the device camera as a barcode scanner (or an external USB Barcode Scanner, supported on Windows and Android platforms) and SQLite database system to allow the user to create a complete catalog (including images) of all their books, CDs, DVDs, Video Games, or any other media. Lists can then be exported to in CSV format or backed up to the cloud. Special care was taken to ensure cross-compatibility between all three versions, including a cloud backup and restore system which bridges the platforms.

WEBSITES AND SERVICES
- Created and developed *PresentPartner.com*, an online retailer-agnostic gift registry aimed at families and groups of friends. Features include the ability to add items via SMS or Android, automatic gathering of product details, easy creation of public or private gift lists, and a social-network-like permission system for sharing gift ideas.

TECHNICAL SKILLS

CERTIFICATIONS
CompTIA Security+
  Exam SY0-501, Obtained April 20, 2020
Microsoft Certified: Azure DevOps Engineer Expert
  Exam AZ-400, AZ-203, Obtained May 14, 2020
Microsoft Certified: Azure Developer Associate
  Exam AZ-203, Obtained April 30, 2019
Microsoft Certified Solutions Developer (MCSD): Windows Store Apps
  Exam 70-483, 70-484, & 70-485, Obtained July 28, 2015
Microsoft Specialist: C# Development
  Exam 70-483, Obtained May 8, 2015
Microsoft Specialist: Architecting Azure Solutions
  Exam 70-534, Obtained April 27, 2015
Microsoft Certified Professional (MCP)
  Obtained April 27, 2015

PROGRAMMING LANGUAGES & TECHNOLOGIES
Advanced: C#, Java, C, C++, PowerShell, Blazor, Xamarin, PHP, SQL
Intermediate: JavaScript, Spring, Java Servlets, Java Swing, JSP, Android, Perl, XML, HTML 4.X, Visual Basic, CSS, XAML
Basic: Python, Hibernate, x86 Assembly, BASH Scripting, LOLCODE

SOFTWARE
Advanced: Microsoft Visual Studio, Eclipse, Microsoft Office Suite, Microsoft Windows, Red Hat Linux (including RHEL, CentOS, and Fedora)
Intermediate: Oracle DBMS, Microsoft SQL Server, IBM WebSphere MQ & Application Server, MySQL & MariaDB, Apache Tomcat, Elasticsearch, MongoDB

OTHER
Licensed Amateur Radio Operator, Technician Level (Callsign KC3AQZ)

HONORS & AWARDS

MEMBER: Phi Beta Kappa, Upsilon Pi Epsilon, Phi Kappa Phi, National Society of Collegiate Scholars, Golden Key International Honor Society

AWARDS: Maryland Distinguished Scholar – Honorable Mention