Matthew Cameron Humphrey, Ph.D

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Project Leader and Software Engineer with 25+ years professional experience with special proficiencies in Enterprise Systems, Service Oriented Architectures (SOA) and Graphical User Interfaces (GUI) across the full SDLC of requirements analysis, design, implementation, testing and deployment. Ten years experience creating custom, innovative systems for clients such as General Dynamics, BAE, Veridian, through my own consulting company, plus more as direct hire. Effective and practical Java / OOP skills and knowledge across broad spectrum of web technologies. Proponent and trained scrum master for Agile methods. Published GUI articles, earned awards, and received patent for multi-perspective collaboration.

Languages Java (25+ yrs), XML, JavaScript, HTML, CSS, SQL, WSDL, Angular 6+, Python 3, Vue.js

Systems Windows, Linux (Ubuntu), WebLogic, GlassFish, Oracle SQL, MySQL, MS SQL Server

Technologies J2EE 6 (15 yrs), EJB 3 (9 yrs), JPA 2, Maven, Ant, JMS (OpenMQ), JSF 2.0, JAX-WS, Web Services, JSon, Swing, RMI, JDBC, JAXB, Hibernate, JProfiler, NetBeans IDE, JBoss, SVN, git, TCP/IP (raw sockets), Web Sockets, X.509 security and cryptography

Virtualization Azure, AWS, VMWare, Vagrant

Certification COMP TIA Security+ 2020, 2023

ADVANCED EDUCATION

PhD in Computer Science (1996)

University of Waikato, Hamilton, New Zealand

Thesis “A Graphical Notation for the Design of Information Visualizations”

Master of Science (M.Sc) in Computer Science (1988) with thesis

“Comparison of an object-oriented programming language to a

procedural programming language for effectiveness in program maintenance.”

Virginia Polytechnic Institute and State University, Blacksburg, Virginia

Bachelor of Science (B.S) in Computer Science (1985)

Virginia Polytechnic Institute and State University, Blacksburg, Virginia

EMPLOYMENT HISTORY -- Complete history available on request

June 2020—present: Technical Project Manager for Hartwood Consulting Group contracts supporting the US Marine Corps Wounded Warrior Regiment System of Record. Leading project innovation and modernization for critical care processes across multiple technologies in an Azure-based virtualized development environment. Innovation of efficient development process to transition mission essential legacy application progressively into modern Angular 8+ partner applications. Proof of concept successes led to significant customer trust, 2 4-year sole-source contracts, and broader contracts. Support business development, technology roadmap development and execution, and staff mentoring and training.

February 2019—June 2020: Wargaming Solutions Architect for Defense Threat Reduction Agency (DTRA-Fort Belvoir, VA) under Advise and Assist Services contract with Integrity Consulting Engineering & Security Solutions. I assisted in the creation of a wargaming research and development management strategy in order to enhance across the Department of Defense, the creation and operation of wargames with modeling and simulation of nuclear effects. Strategy included community engagement, research and development, software project management, and practical exercise support. Helped assemble an upcoming 5+ year portfolio of projects covering over 30 million dollars.

February 2018—December 2018: Chief Technology Officer for Arctan, Inc guiding multi-project technology advancement to unify and consolidate intellectual property into coherent architectural framework. Designed and supervised significant expansions in software capabilities resulting from streamlined development. Provided hands-on development of Multi-actor Bayesian Value-of-Information Message Processing, including analytical, behavioral, and graphical / user interface layers using Java, JSF, Python3, Vue.js, and other web technologies.

November 2016—December 2017: Senior Software Architect Consultant for Arctan, Inc for DARPA project to support research and development of sophisticated distributed communications and simulation platform. Java and R-script development in distributed TCP / IP environment. Produced critical design documents, interface specifications, implementations. Supported successful win of Phase II contract.

November 2016—October 2017: Senior Software Engineer Consultant for EDAU / DOJ in Quantico, Virginia to support highly technical data acquisition systems. Single-page web app including GUI design and implementation in Vue.js, backend services in Python using Falcon services. Analyzed, designed, and developed powerful Java-based transparent USB scan-and-recover data system for deployment on microdevices. Low-level safe-update system for microdevices on Ubuntu 16+ and VMWare image management.

February 2010—November 2016: Chief Software Architect and Technical Lead with CSRA for ETMU / DOJ in Quantico, Virginia. Supervise 5 major projects and 8 developers under contracts with BAE and then CSRA Lead designer and developer for improved Java / J2EE / JSF / JPA web application to streamline subpoena data retrieval process, plus several important web-service applications involving custom protocols. Developed innovative, mission critical Java / J2EE enterprise systems that decreased investigation research times from 2-3 months to 2-3. Full lifecycle support (from requirements through development to delivery) for a sophisticated suite of eBusiness SOAP web services and user applications totalling around 1MLoc. Established multi-system architectural framework with standardized library. Received BAE Bronze Award for innovation.

Sept 2000—January 2009: Founder of Iviz, Ltd consulting company supporting various DoD and commercial (non-DoD) projects for companies such as BAE, Alphatech, Cyberneutics, General Dynamics, and Revenue Technologies. Projects ranged from sophisticated DARPA simulation and visualization system to custom user interface analysis, prototyping, and design for dynamic product pricing. Various technologies (and their supporting frameworks) including Java, C#, .NET, SQL, XML, high-performance computing, and integration frameworks.

**SELECTED PUBLICATIONS –** Full list available on request

Humphrey, M.C., “Creating Reusable Visualizations with the Relational Visualization Notation,” Proceedings of VIS2000, IEEE Visualization, October 8-13, 2000, Salt Lake City, Utah, IEEE Press, October 2000.

Humphrey, M.C., “A Graphical Notation for the Design of Information Visualisations,” International Journal of Human-Computer Studies , Feb 1999.

**AWARDS AND PATENTS**

2019 Appreciation award from Defense Threat Reduction Agency, Research and Development, Nuclear Technologies Forensics Division for contributions to division strategy. Appreciation award from US Army for presentation on Nuclear Wargaming.

2012-2015 Various customer citations for outstanding service.

2011 Patent Award 7,895,020 for Multi-Perspective Modeling collaboration technique

2010 BAE Chairman's Award (Bronze) for Legal Demand Services (multi-component system) for the DOJ.

2006 BAE Chairman's Award (Bronze) for DARPA COMPOEX Simulation system.