

Isaac Hands

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Senior Healthcare Informatics Manager

SUMMARY

Experienced healthcare informatics leader with a deep knowledge of large-scale project execution and technical staff development. Adept at identifying and implementing novel solutions to complex technical problems in an enterprise environment with a focus on business value.

PROFESSIONAL EXPERIENCE

Information Technology Manager III / Lead Software Architect

2009 – present

UK Markey Cancer Center, Lexington, KY

Kentucky Cancer Registry, Lexington, KY

Manage operations and provide technical leadership for the software development, technical support, data infrastructure, and technology decisions at the Kentucky Cancer Registry and the UK Markey Cancer Center Research Informatics Core.

- Responsible for oversight of the development, database and network operations, and customer support of the state-wide cancer patient data management system in use at all hospital facilities in KY and the statewide central cancer registry. This heavily utilized software service, developed over the past 20 years, retains a reputation as one of the best run, highest quality, most innovative cancer registry systems in North America.
- Responsible for technical oversight, planning, and support management of an international, FDA-sponsored web application housed at UK with multiple data consumers across the University.
- Planned, developed, and executed enterprise software system for cancer survivors, utilizing hospital cancer registry databases and third-party care plan software. This software service was deployed in April of 2015 and is one of the only state-wide survivorship care plan solutions in the country that integrates cancer registry data.
- Planned, directed, and executed a complete overhaul of the user experience for a revenue-generating website housed at the Kentucky Cancer registry whose customers include 14 U.S. states and serves an international public health research audience. Part of this overhaul included design and oversight of a mobile application that has led to increased funding opportunities.
- Supervised the creation, deployment, and support of the Markey Cancer Center's first physician and patient-focused mobile application. This popular iOS application for learning about clinical trials at UK has seen widespread adoption and interest in the clinical community.
- Planned and prepared the Cancer Research Informatics Core for the 2012 NCI site visit to decide NCI-designation for the Markey Cancer Center. Our shared resource facility (Informatics) received the highest score of all Markey Shared Resource Facilities during our 2012 NCI designation. Currently planning for NCI-designation in 2017.
- Initiated, tested, and provided oversight for integrating public health databases housed at the Kentucky Cancer Registry with enterprise data warehouses at a large hospital system based in Colorado. The plan was successfully executed within 6 months of project inception and has required very little support.
- Authored key elements and prepared technical documentation for a year-long enterprise security audit of information security policies and practices at the Markey Cancer Center and the KY Cancer Registry.
- Planned, developed, and implemented predictive analytics tools for a highly curated data warehouse to support clinical trial recruitment at the Markey Cancer Center
- Established and hosted an annual cancer research informatics retreat for the past 6 years at the UK Markey Cancer Center to develop tactical (1-year) and strategic (5-year) technical goals and promote team cohesion.

Technical Lead

IBM, Lexington, KY

Led, developed, and supported software projects at multiple architectural levels including large-scale web applications, large-footprint installed clients, native desktop integration, user interface design, security infrastructure design, data federation techniques, database back-end programming, and administration client development.

- Developed and supported one of the most prominent collaboration platforms in IBM's software portfolio to thousands of business users around the world. Responsibilities included software design, custom network software development, authentication and access control services, and customer support.

1998-2009

- Developed high-volume web services to federate relational databases and other data sources for centralized management of a widely deployed, enterprise software product.
- Hardened security of large-scale web applications including elimination of cross-site-scripting, denial-of-service, weak cryptography, and code injection vulnerabilities.
- Directed code reviews and quality audits for multiple large-scale software projects, streamlining functional, build, and system verification tests and greatly reducing software defects.
- Authored many technical documents in support of enterprise software projects including custom web service APIs, authentication and authorization techniques, and high-availability cluster deployment guidelines.

Principal Technical Engineer and Business Owner

2004-2006 (part-time)

Adaptive Bioinformatics, Lexington, KY

Developed and marketed proteomics data analysis software application through entire product life-cycle from requirements gathering to testing, deployment, and delivery.

- Won software development subcontract from the University of Kentucky to support the Mass Spectrometry Core Facility, delivered product that was used for publishing experimental results in peer-reviewed journals.
- Won two Kentucky Science and Engineering Foundation grants to support software development
- Authored and submitted NIH STTR grant, which was scored but not funded.

Software Consultant

1998

Analysts International Corporation, Lexington, KY

Designed, developed, and supported enterprise-wide, hardware-level networking tools for software group at Lexmark International.

- Designed and implemented fault-tolerant error reporting software, integrated with Tivoli enterprise console
- Developed SNMP message broker for enterprise-wide network administration.

Software Engineer

1996-1998

Texas Instruments, Dallas, TX

Developed data acquisition and testing software in support of Department of Defense contracts. Obtained Top Secret security clearance and adhered to government software quality protocols and testing criteria.

- Collected, analyzed, and translated software requirements from Dept. of Defense guidelines
- Designed and implemented quality-analysis software for custom hardware.

COMMUNITY AND PROFESSIONAL SERVICE

Board of Directors

North American Association of Central Cancer Registries, Springfield, IL

2016 - present

Chair, Data Exchange Standard Workgroup

North American Association of Central Cancer Registries, Springfield, IL

2014 - present

Advisory Board for Computer Information Technology

Bluegrass Community and Technical College, Lexington, KY

2013 - present

Educational Counselor

Massachusetts Institute of Technology, Cambridge, MA

2011 - present

EDUCATION

University of Kentucky, Lexington, KY

M.P.H. Biostatistics, 2012

Massachusetts Institute of Technology, Cambridge, MA

B.S. Biology, 1996