

Brian Carter

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SUMMARY

Versatile, results driven researcher with 10+ years' experience within fast-paced environments such as Microsoft, EDS, startup companies, University of Louisville, and University of Detroit Mercy. Seeking to leverage talents in teaching, research, and software product development to effectively teach students, drive research, lead projects, mitigate risk, infuse new ideas, and consistently deliver results. Proven track record for leading teams in the development and delivery of secure enterprise software solutions, training material, and research.

- Analytical leader with "big picture" vision and the ability to work with students, researchers, clients, and staff to convert complex problems into actionable plans.
- Experienced teacher and lecturer in undergraduate, master, and corporate courses. Enjoys all aspects of teaching. Agrees with Albert Einstein that "Critical comments by students should be taken in a friendly spirit" and that our competitive advantage comes from how well we stimulate imagination and creativity.
- Experienced Software Architect, skilled at designing, developing and implementing secure large scale, distributed applications following a defined software development process.

EDUCATION

University of Louisville

August 2009

Doctor of Philosophy, CSE Doctoral Award, GPA 3.9
Degree: Computer Science and Engineering

Research: Optimizing the deployment of heterogeneous sensor networks. The sensor deployment problem was the focus of my dissertation (*Multi-Criteria Large Scale Heterogeneous Sensor Network Deployment Framework*) where I proposed using Native American mapping heuristics with an evolutionary algorithm to advance current state-of-art techniques in sensor modeling.

University of Detroit Mercy

July 1997

Masters of Science, GPA 4.0
Degree: Computer and Information Systems – Software Management

University of Michigan

December 1993

Bachelor of Science, National Honor Society High Honors Award, GPA 3.5
Degree: Computer Science

PUBLICATIONS

B. Carter and R. Ragade. The Game of Deployment: Defining a game for studying sensor deployment problems. Sensors Applications Symposium, 2011. SAS 2011. IEEE, Feb. 2010.

B. Carter and R. Ragade. A probabilistic model for the deployment of sensors. Sensors Applications Symposium, 2009. SAS 2009. IEEE, pages 7-12, Feb. 2009. Research received Best Student Paper award – 1st Place Paper.

B. Carter and R. Ragade. An extensible model for the deployment of non-isotropic sensors. Sensors Applications Symposium, 2008. SAS 2008. IEEE, pages 22-25, Feb. 2008.

Seth Klein, Brian Carter, and Rammohan Ragade. Kinesis-based swarming scheme for mobile sensors. IEEE Swarm Intelligence Symposium 2006, 2006.

Brian Carter and Rammohan K. Ragade. Message Transformation Services for Wireless Sensor Networks (MTS-WSN). The 2006 International Conference on Wireless Networks, pages 3-7, 2006.

Brian Carter. Service-oriented architecture for sensor networks. Richard Tapia Celebration of Diversity in Computing Conference, 2005.

Chippewa Software Technology

2001 - Present

Founder, Chief Research Officer

- CRO responsible for identifying opportunities and risk for delivering company services, including identification of competitive services, opportunities for innovation, and assessment of technical direction. Evaluate and identify technology platforms for secure delivery of assets.
- Responsible for defining and delivering corporate infrastructures including office tools, development environments, and backend data management systems. Responsible for delegating task to development and engineering leads. Systems administrator and security officer.
- Serve as liaison between companies and universities. External advisor for mobile development course at the University of Louisville. Advisor for communicating activities to Microsoft.

Humana

Jan 2011 - Present

Architect (ASP.Net, C#, SQL Server, Ruby on Rails, MySQL, PHP)

- Architect for the development of highly scalable integrated sensor applications.
- Responsible for working with university and startups on bringing sensor research applications to market. Provide engineering guidance and maturing of collateral.
- Working with highly creative team to develop games that are enhanced with sensor based devices. Using sensor feedback and data to engage groups and to increase group dynamics. Research and study healthcare benefits of using game theory and pedometers for increasing participant's activity.

The Rawlings Group

May 2010 – Jan 2011

Healthcare Legal Programmer (ASP.Net, C#, SQL Server)

- Lead for the development of highly secure applications for the healthcare space.
- Manage nationwide data stores containing personally identifiable information and sensitive healthcare records. Optimization of algorithms for very large data stores.
- Provide information to court and legal services. Handling of mass tort litigations.

ACCENT Marketing

Nov. 2007 – May 2010

Software Development Manager / Systems Architect (ASP.Net, C#, SQL Server, DB2)

- Team Leader for over 20 IT professionals responsible for managing, overseeing, and coordinating all aspects of system development for a 100+ million dollar company.
- Responsible for ensuring applications, reports, and processes developed by developers are delivered accurately and on time.
- Coordinated with members of the organization to create and enforce development standards, and with members of operations, people services, finance, and marketing to ensure that proper documentation is in place to support development activities

University of Louisville

Sept. 2004 – Aug. 2009

Ph.D. Candidate / Researcher

- Research focused on developing a model and framework for the sensor deployment problem.
- Proposed using Native American mapping heuristics with an evolutionary algorithm to advance current state-of-art techniques. Advance optimization algorithms for multi-criteria problems.
- Synergistic activities include work on grant proposals with Sandia National Laboratories and Rochester Institute of Technology. Cross university research with Bellarmine University. Presented sensor research to Oakridge National Laboratory.
- Southern Regional Education Board Doctoral Scholar actively participated in the program for five years. Attended the Institute on Teaching and Mentoring to advance teaching skills and research.

American Systems Technology

July 2003 – Sept. 2004

Senior Project Manager (ASP & ASP.Net, C#, SQL Server)

- Managed all aspects of product development.
- Responsible for the management and scheduling of an international development team.
- Standardized the product plans and software development life cycle process.
- Implemented a common platform for all products which improved customer satisfaction, increased suite purchases, lowered product to market time, lowered costs, and improved quality.

- Microsoft** Oct. 2000 – July 2003
MCS Consultant – Microsoft Certified Solution Developer (ASP.Net, C#, VB.Net, SQL Server)
- Advised and provided architecture direction for Microsoft's high impact clients.
 - Managed cross-company teams and was responsible for project negotiation, scheduling, executive reporting, risk assessment, and project execution.
 - Specialized in designing secure, large scale applications for the healthcare space.
 - Presented at several conferences, created content for .Net training, and delivered corporate training sessions. Contributor and reviewer on the Microsoft Solutions Framework team.
- Healthmaster Corporation** Feb. 2000 – Oct. 2000
Software Developer (VB6, SQL Server, XML, Access)
- Lead Software Architect and Developer for the Enterprise Healthcare Application
 - Responsible for all phases of product development.
 - Designed the architecture using a distributed, multi-layered solution for security and scalability.
- University of Detroit Mercy** Jan. 1998 – April 2000
Instructor
- Part time faculty member for the College of Business.
 - Taught software development courses in the undergraduate and graduate programs.
 - Developed course curriculum and materials. Created initial material for object oriented software development course. Class materials also used by other lecturers for many years.
 - *Courses include:* Distributed Software Development, Object Oriented Software Development, Database Design, and Software Maintenance.
- Superior Consultant Holdings Corporation** June 1998 – Feb. 2000
Software Engineer – Microsoft Certified Professional (VB6, SQL Server, Exchange)
- Managed the development and implementation of the Time and Expense financial applications.
 - Managed a cross functional team which integrated the applications with back-end systems.
 - Re-engineered the entry system to lower data entry time, decrease errors, and shorten reimbursement schedule.
- Electronic Data Systems** Jan. 1994 – June 1998
Computer Systems Engineer (VB, C++, SQL Server, COBOL, JCL, DB2)
- Lead many cross platform projects for the General Motors Pension Plan.
 - Technical leader following the System Life Cycle (SLC) methodology to manage the maintenance and re-engineering of different aspects of the accounting system.
 - Responsible for developing project plans, resource scheduling, writing proposals, function point counting, and software development. Collaborated with the actuaries to implement applications.
- Great Lakes Environmental Research Laboratory** Sept. 1992 – Sept. 1993
Computer Science Trainee (C, UNIX)
- Developed programs which performed data manipulation and statistical analysis of weather systems using historic data.
 - Developed a data cleaning and reporting application to report outliers. Through statistical analysis, the program provided visual weather analysis and probabilistic forecasting.
- University of Michigan** Jan. 1991 – Dec. 1993
Computer Consultant (C++, Pascal, FORTRAN, PL/I)
- Provided consulting to students and faculty. LAN Administrator for business department.
- United States Army** Sept. 1987 – Sept. 1990
Enlisted Soldier (Army Service Ribbon, Overseas Service Ribbon, Good Conduct Medal)
- Received an Honorable discharge in 1990. Power Generation Engineer and Postal Clerk.

PROFESSIONAL SOCIETIES

- *Institute of Electrical and Electronics Engineers (IEEE)*
- *Society for Advancing Hispanics/Chicanos and Native Americans in Science (SACNAS)*
- *Leader of the Kentucky Microsoft .NET User Group (KYDotNet.org)*

SYNERGISTIC ACTIVITIES

- *August 2011, Kentucky .Net User Group, presented a session on client side MVCs. Covered client side architectures and design patterns along with testing techniques and documentation.*
- *July 2011, CGames, presented a workshop on "Gaming with Pedometer Data". Session covered how pedometers work, extracting data from a pedometer, displaying information on steps, and engaging the user with game techniques.*
- *June 2011, Microsoft Web Development Fire Starter, presented a 90 minute session on HTML5 Web Development to the next level. This session explored the HTML 5 standard for structuring and presenting content on the Web.*
- *May 2011, nPlus1.org, organized and hosted an Architecture Summit on the campus of the University of Louisville. This summit had two topics: SOLID Foundations and HTML5. Presented a 2 hour session on software architectures and the future of software architectures in reference to HTML5.*
- *March 2011, Kentucky .Net User Group, presented a session on architectures for web and mobile software applications. Presented how HTML5 and mobile devices are changing current application development and architectures. Lead a discussion on future architectures and challenges.*
- *January 2011, SQL Saturday, on board and organization staff for 150+ person event. SQL Saturday is a training event for SQL Server professionals and those wanting to learn about SQL Server. This event delivered free training to students and professionals at the University of Louisville. Responsible for vendor management, fees, and communication.*
- *July 2010, CGAMES, presented a workshop on Mobile Device Application Development at the conference. The workshop will include a mobile device application market survey, an overview of the mobile device application development environments and the challenges associated with them.*
- *January 2009, CinArch, Cincinnati Architecture User Group, Recognized as "Someone you should know".*