

Dr. Steve Bannerman

Chief Technology Officer

WORK EXPERIENCE

2007 - Now

Chief Technology Officer

TimeClock Plus (Data Management, Inc)

I have had and continue to have the opportunity to work with a great team here, as we strive to develop, deploy, and support the best Time and Attendance suite of products in the world. My initial efforts were in providing technical leadership as we built several generations of successively improved web applications. Concurrent with those efforts were providing technical leadership as we mentored and developed our development team. My current efforts are balanced between tactical and strategic technical leadership as we broaden our product offering along a number of dimensions. As well, I'm privileged to be learning about non-technical management from a strong management team.

2005 - 2007

Senior Software Developer

Seagull Software

I had the opportunity to work with the talented client-server BPM team from Oak Grove and later with the team from Seagull, when we joined with them to complement their product offerings in the mainframe world. I helped the team in general, and in particular helped improve the performance of the BPM framework and applications. We leveraged Java and relational databases, bridging the gap with the Hibernate framework.

2003 - 2005

Senior Software Developer

Simplify Software Engineering

I had the opportunity to contribute to the climateprediction.net project at Oxford and also a large and ambitious project at the London Clearinghouse in London's financial district. The former leveraged grid computing (a forerunner to cloud computing) to execute climate model simulations and the latter was my first and only work so far in the financial domain. Both of these new domains were really interesting, having spent most of my career prior to that in the telecommunications domain.

1996 - 2003

Principal Consultant

Applied Reasoning

I had the opportunity to work with some tremendous developers (and people in general) as we worked with Sprint and Sprint PCS to develop next generation network management applications. In particular, we incorporated TINA-C architectural ideas to manage ATM, Frame Relay, and TCP/IP networks on the ION project and provided operational systems to support 3G and early mobile internet gateways. I was able to provide technical leadership in the areas of architecture, analysis, design, and implementation (using Smalltalk, Java, Gemstone, and Oracle). Also, during this timeframe, I was introduced to automated testing and what later became known as test-driven development.

1994 - 1996

Software Developer

Knowledge Systems Corporation

I had the opportunity to work with a great group of people working on a suite of billing applications at Bell South in Birmingham, AL. I co-lead the technical leadership of the team and we benefited from our Bell South colleague who taught us the value of daily standup meetings (among other things). We developed the applications in Smalltalk and used a relational database for persistence.



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SKILLS

Agile Project Management



Enterprise Architecture



People Management



Requirements Specification



Software Construction



Software Design



Software Performance



Software Security



Software Testing



Systems Analysis



1993 - 1994 **Software Developer**

Bell Northern Research

I was able to work with a great group of developers on an ambitious project to replace the DMS-100 switching system software with an object-oriented version of its proprietary language (Protel to Protel 2). Unfortunately, the overall project was not successful. However, personally, it was beneficial as I was able to continue applying the Smalltalk skills I had learned at IBM while being immersed and trained in the telecommunications domain.

1991 - 1992 **Software Developer**

IBM Canada

I had the privilege of working with a talented and experienced group that was very generous as they mentored me and as we all prototyped and developed an order management operational support application. We used the Smalltalk VPM environment to prototype the application, which was very influential on me and my eventual career path.

EDUCATION

2001 - 2010 **D.Phil - Software Engineering (Part-time)**

University of Oxford

While I was still learning about what it means to research, I spent a lot of time focused on requirements specification (formal specification, use cases and scenarios, and informal specifications). Then, as I honed in on my research topic, I focused on empirical research of open-source Java projects and the relationships between the changes to automated test suites and the changes to the products that they were testing.

1997 - 2000 **M.Sc - Software Engineering (Part-time)**

Southern Methodist University

When I started at SMU, I had been focused on software implementation for the previous 6 or 7 years. My courses during this degree really broadened my understanding of software development in general and have given me a framework for getting better in all areas of software development, implementation included. And, I found that I was able to apply what I was learning at school to my work on a daily basis and that I was able to bring what I was learning at work to inform what I was learning at school. I highly recommend this program.

1988 - 1993 **B.E.Sc - Engineering Science (Electrical)**

Western University

During my time at Western, our class spent a lot of time using mathematics to model different aspects of electrical engineering. And, although I didn't know it at the time, these skills that I started to develop then have proven to be useful in my career in software development. In particular, it is sometimes useful to understand what goes on within our layers of abstraction and it is often useful to be able to analyze and to work with abstractions.

CERTIFICATIONS

2001 - 2001 **Sun Certified Programmer for the Java 2 Platform**

2001 - 2001 **Sun Certified Developer for the Java 2 Platform**

2001 - 2001 **Sun Certified Enterprise Architect for the Java 2 Platform**

2003 - 2003 **Scrum Master Certification**

AWS



Bash



C#



Databases



Design Patterns



git



Java



JavaScript



Python



Ruby



SAML2



Scrum



svn



TypeScript



XUnit



PUBLICATIONS

Empirical Software Engineering (April 2011, Volume 16, Issue 2, pp 177-210) - A multiple comparative study of test-with development product changes and their effects on team speed and product quality (<http://tinyurl.com/ydxbfo79>)