Curriculum Vitae: Andrew Douglas.
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Skill Set: C# and .Net, SQL. Older knowledge includes C/C++, Java, MVC frameworks, good concurrency knowledge, functional programming.

Personal Profile: I am a keen and willing software developer/programmer, with a wide range of experience under my belt. My experience ranges from web development, light data-science jobs, to solid research work.

Employment History:

December 2014 – June 2016 : Research Consultant (Contract), Microsoft Research, Cambridge.

- Analysing file system logs to produce representative use file access patterns for a cloud-based file system. This meant piecing together block accesses to produce a set of files and access times.
- Used a discrete event simulator to replay these traces, and model various designs for moving files from 'hot' storage to 'cold' storage, to see if we could come up with a good general design.
- Wrote various discrete event simulators to model interaction between servers and disk drives, based on a novel reconfigurable switch.
- All of this was using C# - the discrete event simulator was developed in-house, and I had to do some debugging of this. I also wrote a lot of documentation.

April 2011 – December 2012: Research Consultant (Contract), Microsoft Research, Cambridge.

Worked on various projects instigated by the research staff at MSR Cambridge, using C#.

- Used a graph-based run-time to investigate basket analysis (frequent item set analysis – which n products appear together most frequently in shopping baskets). This run-time was implemented across a system of machines networked to form a hyper-cube.
- A former student had implemented a key/value store called Jekyll and Hyde, and I spent several months re-implementing it to use the hyper-cube run-time. The novelty was that the KVS had two distinct 'phases' – an in-memory multi-core single machine which held the entire store, and a distributed replicant. The in-memory store was used for point operations (create/read/write/update) whilst the replicant was used for map/reduce-like operations across the whole store.
- Investigation of a commercial hyper-cube parallel computing platform.

March 2002 – May 2008: Activehotels/Booking.com

A hotel booking website, which went through three phases as Activehotels.com, Activehotels.com owned by Priceline, and Active-hotels merged with Booking.com. The company still exists, as Booking.com.

Activehotels.com:

- Early days site was PhP and MySql.
- Worked in a team, using eXtreme Programming agile methodology, to extend website with new functions. This included full-on pair programming, test-driven development, monthly planning game, story cards, and measurement of productivity.
- Began rewrite of site using Java and various J2EE technologies and JBOSS application server.
- Promoted to Systems Architect and, for a short while, managed the development team.
- Implemented hotel search, availability and booking against various outside hotel companies own booking systems, querying availability and make bookings using OTA, a travel-based XML schema or proprietary formats.

Priceline.com:

- Full green-field site re-build.
- Was part of an ad-hoc team, answerable to the Ops Director, involved in trouble shooting and system performance, and the release cycle.

Booking.com:

- When we merged with Booking.com – a Perl site – I was part of a team that helped transfer the Active-hotels hotel stock to the Booking.com system, and various systems to maintain the shared availability across the two sites until one system could be switched off.
- Part of a team that worked on an OLAP cube implementation for providing management and sales with various statistics about past and future bookings and availability.

March 1999 – November 2001: Netcentric Systems.

We implemented a content management system for web sites. Joined when the company was just four people, and helped to architect the system in the early days. Used Java and an OO database in the early days, then moved to Java/SQL/client-server. Worked with management, sales and consultancy teams – we even did trade shows.

February 1997 – March 1999: Research Scientist, Persimmon IT.

Worked on various projects/teams (in the UK and with remote members in the US), including writing a compiler for ASN.1 in Standard ML, and a collaborative web-based environment using Java, Applets and Java-script.

Jan 1994 – Feb 1996: Research Assistant, University of York Computer Science Department.

Implementing various run-time and programming language extensions for Linda, a novel asynchronous model of co-ordination and message passing for parallel processing.

Education:

BSc (Hons) 1st class Computing Science, Staffordshire University, 1990.

PhD Computer Science, University of Kent at Canterbury, 1997.
A Compiled Functional Language with a Martin-Löf Type System.