**Neil Blue Ma(Hons) MPhil**

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D.O.B: 8th January 1972

Education:

1996 - 2000 University of Kent at Canterbury

M-Phil in Psychology

1990 - 1995 Dundee University

First class MA (Hons) degree and Medal in Psychology

1988 - 1990 Kingswood Comprehensive School

Physics A-Level grade B

Chemistry A-Level grade C

Maths (Advanced) A-Level grade D

Maths AO-Level grade B

Employment:

2015 - present - Principal Software Engineer - GEO

As technical lead and cloud architect I work on the design and implementation of our next generation energy monitoring system. GEO is the market leader for in-home IoT energy monitoring, and near real-time data handling. I designed and lead the system implementation, based on a micro server architecture. This is hosted on AWS with a mixture of in-memory and persistent NoSQL (cassandra and redis) storage solutions for rapid data access. Using both direct EC2 instances and Docker contained services.

Working with customers (energy providers) I developed a range of B2B data streaming solutions for providing near real-time data to populate customers own cloud based solutions.

2008-2015– Java Solutions Architect – BioWisdom/Instem

BioWisdom was acquired by Instem in 2011. At Instem I have lead design and development on a range of projects and bid applications. BioWisdom has focused mainly on providing solutions to help re-purpose legacy data to provide novel insights in the life sciences.

I have currently been working on various tools to provide rapid statistical analysis of term topicality and phrase co-occurrence across a large data corpus (~100Gig), with only standard desktop hardware. Where up to 0.5M terms were being concurrently searched for across a large corpus using a minimal memory footprint. This tool was developed to allow for consistent high level processing of semi-structured and unstructured text.

Another one of my recent project has been the development of a full stack big data processing framework, using a mixture of hadoop dfs, hbase and J2EE for the back end services. With RESTful web services and JQuery for the API and user interface. This project formed the basis of a TSB research grant and was intended to be deployed at a STFC installation. The project was aimed at providing secure storage for data files with metadata support and a framework based on Hadoop for the remodelling and exporting of this data for statistical analysis.

At BioWisdom I have designed and developed a range of applications with a focus on taxonomy resolution and the resolution of large term networks. One such project involved the design of a hbase backed RDF like storage and query system for the merging and management of multiple ontologies.

As well as server based applications I have been involved in the development of novel algorithms for text mining and semantic evaluation. One such project was MetaWise where I developed a suite of non-NLP libraries for the identification of life science concepts in free text and the categorisation of non-standardised life science terms. The main focus of these libraries was to efficiently search a very large problem space rapidly, largely through the use of early search termination routines

2006-2008– Software Architect/Team Leader – 1Spatial

At 1Spatial I managed a project to transfer a legacy desktop application to run on a distributed grid architecture. The application managed the cleaning of 2D spatial data with a core spatial database implemented in C and a Java application wrapper and user interface. The application was successfully re-designed and implemented to run on the Sun Grid Engine. The customer for this application was TeleAtlas/TomTom who used the distributed application to clean their 2D maps.

2006 Jan-Oct– Senior Software Engineer/Team Leader – Marketpipe

At Marketpipe, I had the role of Technical Lead, developing the next version of our book building application for the primary bond market. The feature requirements of the current application have grown with the demands of the company's customers, who include a number of top global banks.

The book building application needed to allow for multiple site data replication and internal site application clustering. I provided the architectural designs for the implementation of the new system, which relied on a combination of Spring and Hibernate to replace the previous J2EE persistence tier. The application also had a client facing API to allow for integration with a banks internal IT systems and which also provided a consistent platform for the development of a web based interface.

2004 – 2006 Senior Software Engineer/Architect – BioWisdom

At BioWisdom, I designed and managed the implement of the company's next generation ontology management system. The system provides fast flexible access to an ontology database, and is accessible via a range of API’s. The distributed application addresses the needs of editing and querying large pharmaceutical ontology databases.

The middle tier implementation is based on a J2EE application server to allow for horizontal scaling and distribution. The modular design of the system allows for integration and extension at various levels, and provides support for a wide range of GUI clients, with a number of middle tier API’s.

2001 – 2004 Senior Systems Architect - De Novo Pharmaceuticals Ltd

At De Novo Pharmaceuticals I worked as a Senior Systems Architect and technical manager, developing and maintaining EJB and Web Services based integration systems. The systems integrated various 3rd party and in-house applications for the generation and conversion of small molecules, and managed job submissions on an 80 node SUN Grid engine.

Historically DNP were an academic spin-off from Cambridge University and required the development of an IT infrastructure. In order to facilitate this I took a lead role in recruiting a Network and Security manager, IT support staff, additional Senior and Junior developers and a DBA. As a condition of the second round funding, the company was required to adopt a more industry standard approach to software development, and in order to promote this I introduced the use of CVS, unit testing, project management software and workable coding standards.

The main project that I managed at DNP was Sun Grid Engine based system for scheduling long running in-silico design jobs and collecting the in-silico results in a small-compound database that I also designed. The project was delivered on time and allowed for the collection and analysis of data which was previously too expensive to store for potential IP, and reduced the process running time from 12 hours to 20 minutes allowing for the testing or more complex strategies and simulated conditions.

2000 - 2001 Senior Systems Engineer - Synomics Ltd/Accelrys

At Synomics I worked as a Senior Systems Engineer and Architect, developing distributed chemo-informatics systems, and providing technical lead and management for a team of three developers. I also worked closely with the project managers and sales teams to provide the features and enhancements required for a conference deadline.

The main project that I worked on provided end user access to a wide range of distributed 3rd party products. The system pulled together documentation from Excalibur and SmartLogik document engines, small molecule information from compound databases, patent information from publishers and user generated annotations.

This project was particularly enjoyable as at the time it provided the opportunity to push the limits of the WebLogic application server and the J2EE specification of the time.

This project was delivered on time and well received at the DDT 2001 conference. This produced a large number of sales leads and lead to other copycat products in the domain.

When Synomics was acquired by Accelrys, I continued as Architect and took over a project working on the integration of various systems from other companies which Accelrys has also acquired. When I joined the project was aiming to provide an EJB integration solution for Abbot, however after reviewing the project proposals and meeting with the project manager, I designed a new integration solution based on Web Services, which at the time was in the early stages of adoption within the industry. The new architectural designs were well received by the customer and the company received an unexpected award for the design.

2000 Jan-July Senior Software Engineer - Chadwyck Healey

At Chadwyck Healey I worked as a Senior Software Engineer taking a key architectural role in the design of the company’s first Java based Web applications, using Java servlets. I also worked to promote the adoption of JSP’s as a developing technology.

As Java was a new technology for Chadwyck Healey I worked closely with other members of the team who had a background in PERL and C++ development, to bring them up to speed.

The application provided a searchable online document repository, for expert users. This project required integration with new document repository system from RetrievalWare, which had recently gained a Java API. As a result I worked closely with the 3rd party vendors while they were also developing their APIs.

In a wider technical design role, I worked closely with the IT department where we were using a collection of SUN servers with the Veritas failover system management software to provide 24/7 access to the repository. This system also required hooks into the HTTP protocol via managed cookies to provide access to host bound memory resident data for user sessions.

This project was completed on time and formed a template for further Java products.

1997 - 1999 Analyst/Programmer - South Bank Systems Plc

At South Bank Systems I worked mainly on R&D projects from inception to delivery. In this role I often worked with ‘visionary’ requirements, which meant that I needed to collect detailed user requirements where possible and work closely with 3rd party vendors and customers to produce the final products.

Within R&D I managed projects focusing on the integration of GIS and media systems with our database front-end products. I also designed data collection software on mobile Windows CE embedded devices for use in the field, using VBCE and VBC++.

As I was providing new integration opportunities for the main product suite, I worked to develop a set of development best practices and coding standards for PowerBuilder developers, to pull together a diverging code base.

Development design and languages:

Java - java is my main development language due to its flexibility in dealing efficiently with large server based applications, and provides good cross platform resource management.

J2EE – Many of the projects I have been involved in have made use of the J2EE platform to varying degrees, taking advantage of the standardised distributed platform model combined with good integration potential. I am particularly interested in the developing meta programming opportunities offered by the Java reflection API, generics and annotations.

UML – I have used UML on a regular basis during the design phase of a project. I make use of UML diagrams for a range of purposes, from high level diagrams in early stage design and sign-off documentation, to detailed engineering requirements for implementation.

Semantic Web – I worked on a number of data modeling projects using the RDF, RDFS and OWL specifications to develop ontology data models.

Skills:

I like to take on new challenges, which require the use of my creative design abilities. I enjoy solving new problems or addressing old problems in a new way. I like to see projects through the full project lifecycle from inception to delivery, and have a good track record for delivering projects on time and meeting requirements.

Other languages used include:

JQuery, javaScript, Groovy, C, Python, PHP, C++, Visual Basic, Visual C++, C#, Perl, PowerBuilder 6.5, MapBasic, ArcView and PROLOG.

Other platforms used include:

AWS (various services) Eclipse, CVS, Subversion, Ant, Junit, Maven, Gradle, Apache web server, Tomcat, JBoss, Websphere and Weblogic, Struts, NIO, JSF, GIT, Spring, Hibernate, Docker, Docker composer.

Databases:

Cassandra, Redis, HBase, Oracle 8/9i/10g/11 plus some cartridges, MySQL, Sybase SQL plus, Derby, H2 and some proprietary databases.

Operating systems:

Linux -used both for development/test machines and host servers.

Solaris 8 - used almost exclusively as host servers.

Windows 9x, NT, 2k, XP, Vista, Win7 - used mainly for developer machines or as client terminals.

Interests:

In addition to my full time job I enjoy the gym, road running and swimming. I am also trying to develop my drawing and painting skills.