Paul Bedworth

Curriculum Vitae

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DOB: 28th Sep 1973

Education

1996-1997 **Edinburgh University, Laboratory of Foundations for Computer Science**, *Research Student*.
1992-1995 **Edinburgh University**, *BSc, 1st Class Honours Degree in Computer Science*.
1988-1992 **Ilkley Grammar School**, *A-Levels in Maths (A), Computing (A), Chemistry (A), Physics (B), 9 GCSEs (A)*.

Certifications

Jun 2018 **AWS Certified DevOps Engineer - Professional**.
Dec 2016 **AWS Certified Developer - Associate**.
Dec 2016 **Oracle Certified Professional, Java SE 8 Programmer** *(refresh for Java 8)*.
Mar 2013 **Functional Programming Principles in Scala**.
Mar 2009 **IBM Certified Solution Developer: IBM WebSphere Portal V6.1**.
Mar 2002 **BEA WebLogic Certified Developer**.
Mar 2002 **Linux Professional Institute Exam 1**.
Jul 1999 **UML Course: Analysis and Design with UML**.
Mar 1999 **CORBA Course: Building Distributed Applications with Orbix Web**.
Mar 1999 **Sun Certified Java 1.1 Programmer**

Skills

Languages*:* Java, JavaScript, Scala, Groovy, GOLANG, Ruby, Perl, Bash, Make, C, C++, PL/SQL.
Server*:* Spring, Spring Boot, J2EE, Microservices, Swagger, RAML.
Web: React, Redux, VUE, QUASAR, JQuery, JSP, Mustache, HTML & CSS, WORDPRESS, PROCESSWIRE, JEKYLL.
Testing: TDD, JUnit, BDD, Cucumber, Selenium, WebDriver, Nightwatch, Wiremock.
Dev Tools: IntelliJ, Eclipse, GIT, Gradle, Maven, Slack.
Database: Oracle, DB2, MySQL, Sybase, Derby, Redis, JDBC, Hibernate, MyBatis, Hadoop, Impala
DevOps: Setup Jenkins 2, CI/CD Pipelines, Artifactory, Nexus, Sonar, OpenVPN, Squid, HAProxy, Apache, Tomcat, ECS Clusters, Rancher, Docker, CloudFormation, Ansible, PCF.
AWS: CloudFormation, ECS Clusters, Lambda, SERVERLESS, API GATEWAY, EC2, Dynamo DB, S3, SQS, SNS, ELB, ALB, NLB, RDS, Elasticache, CloudSearch, CloudWatch, CodeStar, CodePipeline, CodeBuild, CodeDeploy, CodeCommit, Elastic Beanstalk, Workspaces, CloudFront, WAF, Inspector, Trusted Advisor, GUARD, DUTY, SES.

Projects

Dec 2017 – Present **Lead Full Stack Developer (Contract)**, *RBS (Technology Services)*, **Gogarburn, Edinburgh.**
I have been working in the seed agile team tasked with starting the Mortgage Cloud project at RBS. This has been a hands-on developer role designing and building Microservices (Spring Boot and Lambda), User Interfaces (React) and AWS Infrastructure in the Public Cloud (defined using CloudFormation). A BDD approach was used (Cucumber and 3 Amigos). As well as Java 8 and React/Javascript/ES6, It has been a DevOps heavy role and has included building the CI/CD Pipeline and Development tools (using Jenkins 2, CodeBuild, Artifactory) as well as the platform on AWS and environments up to production (ECS Cluster, Lambda, CloudFront and many other pieces of AWS infrastructure). The role has involved collaborating with RBS stakeholders, 3rd-party suppliers and fintechs, and the complete project lifecycle, including putting the designs through the architect board review, penetration testing and getting security sign-off. The role has also involved growing the team, including interviewing new team members and getting them started.

Sep 2017 – Dec 2017 **Senior Developer (Contract)**, *RBS (Private Business Banking)*, **Gogarburn, Edinburgh.**
Contract to deliver a new Faster Payments web application to be completed before the regulatory deadline. Java 8, React, Javascript (ES6), Single Page Application (SPA), Hadoop, HDFS, Cloudera Impala, Big Data, Microservices, Spring, Embedded Tomcat, Mocha, Chai, Babel, Node, Nightwatch, Zambezi, GIT, BitBucket, JIRA, SCRUM, TeamCity, Agile Applications, Faster Payments.

Apr 2017 – Aug 2017 **Senior Java Developer (Contract - Chelsea Apps Factory Consultant)**, *Standard Life*, **Edinburgh.**
Project working within the JBoss Tech Team to investigate options for moving Standard Life's Continuous Delivery Pipeline. Followed by an agile Java development project within the Workplace Pension Team to build out new web functionality (customer-facing) and REST Services to support eligibility assessment and auto-enrolment for Workplace Pension Schemes. Java, Javascript, JBoss, RESTEasy, CDI, MySQL, Maven, Jenkins, GIT, GitLab, Selenium, WebDriver, Mockito, Agile, JIRA, User Stories, 3 Amigos, TDD, Pair Programming, Continuous Delivery, DevOps, AWS CodeStar, AWS CodePipeline, AWS CodeBuild, AWS CodeDeploy, AWS CodeCommit, Elastic Beanstalk, Workplace Pensions, Auto-enrolment, Re-enrolment.

Jan 2017 – Apr 2017 **Senior Software Engineer (Contract)**, *BBC*, **Glasgow.**
Contract working on the BBC's Platform and Common Services. Developing AWS components and microservices in the Cloud (implemented in Java, Groovy and Python using AWS Lambda and EC2). Java 8, Groovy, Spring, Spring Boot, Ruby, Python, Cucumber, BDD, Linux, DevOps, AWS CloudFormation, AWS Lambda, AWS EC2, AWS Dynamo DB, AWS S3, AWS SQS, AWS SNS, JMS, AWS RDS, AWS CloudWatch, Gradle, RxJava, WireMock, Dagger, Retrofit, OkHttp, Troposphere, Splunk, Swagger, REST, Microservices, Artifactory, Jenkins, Job DSL, Ansible, Vagrant, Continuous Delivery, Agile, Pair Programming, Mob Programming, SCRUM, JIRA, GitHub, Media, Meta Data, Broadcast Data, Programme Data, API development.

Sep 2014 – Dec 2016 **Senior Java Developer (Contract)**, *Tesco Bank*, **Edinburgh.**
Contract to deliver Tesco Bank's new Motor and Home Insurance customer-facing web applications
(complete rewrite from scratch), replacing their existing legacy 3rd-party systems, bringing them in-house with
an updated and optimised journey, and also onto the Cloud (AWS). Java 8, Javascript, IntelliJ, Spring MVC,
JAX-RS, REST, AWS EC2, REDIS, Amazon Elasticache, Amazon ELB, Amazon RDS, Amazon ECS,
Javascript, ES6, React, Nashorn, JQuery, Mustache, AJAX, Tomcat, Spring Boot, Spring Session, Oracle,
Gradle, Grunt, NodeJS, Jenkins 2, Nexus 3, Docker, Rancher, Cucumber, Selenium, Web-driver, Mockito,
Agile, Kanban, General Insurance, Banking, 3D-Secure Card Payments.

Oct 2009 – Aug 2014 **Senior Software Engineer (Contract),** *IBM (Rational Software)*, **Edinburgh.**
Working on developing the next-generation version of the market-leading DOORS Requirements Manage-
ment System. Java, OSGi/Eclipse plugins, REST Services, HTTP, Derby, DB2, Websphere, Jetty, Jena,
RDF, SPARQL, Triple-stores, Requirements Management Systems, Linked Data, Software Development,
Performance Tuning, Automated Testing, Continuous Delivery, Computer Software, Agile Development,
Rational Team Concert.

Apr 2009 – Sep 2009 **WebSphere Portal Consultant (Contract),** *BSkyB*, **Edinburgh.**
Contract to deliver the Portal solution for BSkyB's next-generation Retail Customer Contact Centre
application. Java, WebSphere Portal 6.1, RAD, Spring MVC, Portlets, JSR 168, Oracle, PL/SQL, Web
Services, ESB, WSDL, XML, JAXB, JMS, Oracle, PL/SQL, JSP, JUnit, Ant, Hudson, Subversion, Continuous
Integration, Agile Development, EasyMock, Selenium, FitNesse, WebDriver, Web Development, Unix, Shell
Scripts, CRM, Media.

Dec 2008 – Mar 2009 **Senior Analyst Developer (Contract),** *HBOS/Lloyds Banking Group*, **Edinburgh.**
Contract to deliver two separate projects for Intelligent Finance bank, relating to Debit Cards and Mortgages.
Java, J2EE, Weblogic, Mid-Tier Development, EJB, MQ Series, JMS, Service-based Architecture, Oracle,
PL/SQL, Stored Procedures, JSP, Servlets, JUnit, Ant, Web Development, Unix, Shell Scripts, Financial
Services, Core Banking Systems, Mortgages, Debit/Credit Cards, Mortgage Affordability, Credit Risk.

Aug 2006 – Nov 2008 **Trading Systems Developer (Contract),** *UBS Investment Bank*, **City, London.**
This was a contract developing and supporting UBS's Direct Market Access (DMA) and Algorithmic Trading
System for European Cash Equities. This system provides external clients with access to over 30 equity and
derivative markets around the world. Front Office Trading Systems, Message Bus Architecture, Direct Market
Access (DMA), Algorithmic Trading, Automated Testing, Java 5, Oracle, PL/SQL, Sybase, ClearCase, JUnit,
Eclipse, Perl, Tibco Rendezvous, CruiseControl, Subversion, Linux, Solaris, FIX 4.4, Equities Trading
Systems, LSE, SETS, Euronext, Xetra, Market Data and Reference Data systems. Agile Development,
Continuous Integration.

June 2006 – Aug 2006 **Java and Oracle Developer (Contract),** *Barclays Capital Investment Bank*,
Canary Wharf, London.
Development of a middle-office deal-management system. This was a web-based workflow application which
integrated with a third-party document management solution. Java, Oracle, PL/SQL, XSLT, Spring, Struts,
Apache Tomcat, Eclipse, Hummingbird Document Management System, ClearCase, Ant, Autosys, Data
Feeds, Javascript and Ajax-based User Interface, Deal Management.

Mar 2006 – Jun 2006 **Java/J2EE Developer (Contract),** *Betfair,* **London.**
Contract to develop the Betfair Web Service API. Java, J2EE, JBoss, Web Services (Glue), Maven, Eclipse (multiple componentised projects), Perforce, Struts, Extreme Programming (XP), Oracle, PL/SQL, Ant Hill Pro, Functional Tests with NUnit using C# and .NET, Agile Development, Automated Betting Systems, High Performance Betting Systems.

Aug 2000 – Mar 2006 **Mid-tier Lead Java Developer (Contract)**, *Intelligent Finance (HBOS)*, **Edinburgh.**
Worked on launch of greenfield Intelligent Finance bank and many subsequent further projects to bring to full maturity. Java, J2EE, Weblogic (large cluster), Mid-Tier Development, EJB, MQ Series, JMS, Oracle, PL/SQL, Stored Procedures, Web Services (Apache Axis), JSP, Servlets, JUnit, Ant, Web Development, XML, XSLT, Perl, Unix, Shell Scripts, C, Many Business-driven Projects, Financial Services, Core Banking Systems, Mortgages, Savings Accounts, Loans, Credit Cards, Current Accounts, Credit Risk, Address Matching, Equifax, Mortgage Pricing, Application Architecture, Design Authority.

Nov 1999 – Jul 2000 **Senior Java Developer (Contract),** *Workthing.com (Guardian Media Group),* **London.**
Startup creating workthing.com job website for Guardian Media Group. Java, Web Development, Struts style Model-2 JSP, DB2 / UDB / SQL, JRun, Apache, Servlets, Complete design & development of complex web application from scratch, XML, XSLT, Verity Search Engine, Document Indexing, Content Management (CMS), Unix (Solaris), Developer Build Environment & Production Deployment Scripts, CVS, Iterative Design from basic Functional Spec, Job Feeds, CV processing, Ad Servers.

Aug 1999 – Nov 1999 **Principal Java Developer (3 month contract),** *ITN,* **London.**
Worked on developing and supporting the ITN web site (http://www.itn.co.uk). Java, Web Development, News Feeds, Republishing and tailoring of content, JSP, Servlets, Perl, Unix/Solaris Server Administration, Apache, Sendmail, MySQL, XML, Data Feeds, Content Management Systems (CMS), Day-to-day running and development of ITN and associated web sites, Working with and supporting journalists.

Jul 1998 – Aug 1999 **Developer,** *The Financial Times,* **London.**
Worked as a developer on ft.com web site and FT Information products, such as: FT Discovery, FT Newswatch and Profile Web. Java, Perl, Corba, JSP, Oracle, DB2, Unix (AIX), Websphere, JRun, Web Development, Verity Search Engine, Market Data Feeds, Company Data, News Data.

Jun 1997 – Jun 1998 **Software Engineer,** *EDINA, Edinburgh University,* **Edinburgh.**
Worked on DigiMap (google maps style user interface). Java, Perl, Web Development, Java GUI Development, Applets, Ingres, Unix (Solaris), Shell Scripts, Apache, CVS, Geographical data.

Jul 1996 – Sep 1996 **Compiler Developer,** *Harlequin,* **Edinburgh and Cambridge.**
Java, Compiler Development, Dynamic Object Oriented Programming Languages, Sun's JVM internals.

Jun 1995 – Sep 1995 **C++ and Lisp Programmer,** *AnTeallach,* **Edinburgh.**
Windows NT user-interface for AnTeallach's custom EpiScript language. C++, Lisp, Compilers.

Jun 1994 – Sep 1994 **System Administration**, *Edinburgh University, Dept Computer Science,* **Edinburgh.**
CERN HTTPD internals, Unix (SunOS/Solaris), C, Sockets, TCP/IP, Client-Server, Shell Scripts, Perl.

Personal Projects

Recent projects include:

- CMS Project integrating with GITHub: UI is Vue.js with Quasar, Server is using Serverless with AWS API Gateway, AWS Lambda functions written in the Go Language (Golang). Authentication using AWS Cognito User Pool. OpenVPN and NAT Instance for access to private subnets. Aurora serverless database.
- Recruitment Management System: Similar Vue.js + Serverless stack to above.
- Wedding Photography Website: Large site with many galleries and assets. Migrated from WordPress to ProcessWire CMS and statically published to AWS CloudFront CDN to eliminate the need for EC2 servers.

Interests

Blues music, Travelling, Science and Technology, Computer Science, Artificial Intelligence, Programming Languages, Compilers, Operating Systems and Unix, Automation, Dev/Ops and Cloud, Security, Publishing and Content Management Systems.