

**SYNOPSIS** Educator, physicist and software engineer. Broad and extensive experience of internet technologies and data-driven web solutions. International track record in Education, IT, Project Management, Simulation and Training. Excellent interpersonal and communication skills at all levels.

**EDUCATION** **Edinburgh University**, Moray House School of Education  
• PGCE (Secondary: Physics and Mathematics), July 2004  
**The Open University**, Milton Keynes  
• B.Sc. (Hons), November 2002

**QUALIFICATIONS** **The General Teaching Council for Scotland**  
• Full Registration (Mathematics), April 2006  
• Full Registration (Physics with Science), July 2005  
**The Science Council**  
• Chartered Scientist (CSci), July 2004  
**The Institute of Physics**  
• Member (MInstP), July 2003  
• Chartered Physicist (CPhys), July 2003  
**The Microsoft Corporation**  
• MCSD Charter Member, 1999  
• Microsoft Certified Solution Developer, June 2001  
**The Royal Aeronautical Society**  
• Corporate Member (MRAeS), August 1999



**PROFESSIONAL EXPERIENCE** **cullaloe.net** trading as *Al Muhandis*, Fife **April 2003 to date**  
Sole trader business providing consultancy and technical services.  
• Designed and implemented community website for Physics Teachers in Scotland at <http://sptr.net> using WordPress, PHP, MySQL, Javascript, JSON, WP Plugins including customisation of these  
• Implemented and rolled out Project Management System using Ruby on Rails, Redmine, MySQL on Centos 6.4  
• Hosting several community and business websites using WordPress, Joomla!, Drupal at <http://cullaloe.net>  
• Set up community sites using phpBB, MySQL (e.g. <http://sptr.net/forum>)  
• Established educational websites using Moodle, Joomla!, WordPress, MediaWiki, ELGG and other suites  
• Unix server administration on shared hosting and VPS including configuration, upgrade, extension and scripting of tools

**Edinburgh University**, Moray House **August 2012 to August 2014**  
*Teaching Fellow* seconded to lead the PGDE Secondary Physics programme. Also teaching on Secondary PGDE General Science and science strand leader for Primary PGDE/BEd Science.

**Fife Regional Council**, Education Service **August 2004 to July 2012**  
*Principal Teacher, Physics (Glenwood HS)*  
*Teacher of Physics & Mathematics (Kirkcaldy HS)*  
*Teacher of Physics & Mathematics (Probationer, Buckhaven HS)*

Fixed rate, fixed price and cost-plus contracts for clients, including:

- **The Scottish Centre for Infection & Environmental Health**  
Designed and built the medical reporting system ECROSS using SQL Server 7.0, NT4/IIS, .asp, XML, XSLT, VSS, UNIX  
Designed and built the Quick Response (GP Medical) Surveillance System QRSS using SQL Server 7.0, NT4/IIS, MAPI (Exchange)  
Delivered training and full documentation for users and support staff
- **Purves Plant Hire**  
Design specification for plant tracking/scheduling database application using NT4, Access, Windows 2000
- **West Lothian Council**  
Conversion of Pagemaker 6.5 forms to dynamic Adobe pdf forms
- **Scarlet Training**  
Contract trainer, delivering courses on HTML 4 (Intro and mastering), Java programming, Dreamweaver 4/UltraDev, Adobe PDF programming, Microsoft Mastering VB6 series (Fundamentals, Development, Enterprise, Web App Development), MOC833 SQL Server 7
- **LearningIT**  
Contract trainer, delivering courses in advanced HTML, CSS, Javascript, Java programming, Java for C programmers
- **Aspentech**  
Design analysis & report on the Heysham 2 Process Plant Simulation upgrade
- **Greater Glasgow & Clyde Valley Tourist Board**  
Design and implementation of the visitor information and accommodation booking system website using SQL Server, NT4/IIS, ASP, XLS/XSLT, Javascript, dynamic HTML
- **Deutsche Bank**  
Design and development of Private Clients Investment management system using Access/VB6/NT/Win2K
- **Bull**  
Design and development of Kwik-Fit Insurance call centre suite using Graham Technologies GT-X system, VB6/NT
- **ICL**  
Systems update (Millennium Bug) for tools and utilities using VB4/SQL
- **Anglian Water**  
Support and programming for systems roll-out using VB4/Windows98/2K/NT

**GEC Marconi Simulation and Training**

**July 1991 – February 1997**

*Senior Software Engineer*

- GUI application development for auto-initialisation code generation in C
- Designed and coded a fault injection package, real-time process plant simulation models and a developer's toolkit for real-time parameter display
- Using: Microsoft VB 4.0, Access SQL, C/C++, VSS, NT3.51

*Data Control Manager*

- Software Configuration and Engineering Control, Shajiao , C Power Station

*Bid/Project Manager - Military Operations*

- Connah's Quay Power Station simulator
- AS 90 and Warrior OPV military vehicle simulator
- Sea King HAR Mk3A Radar Crew Trainer
- CATT Feasibility Study, MECCA/MARCAS IT system feasibility study
- Bids for AFV Turret (Kuwait) and Sea Harrier FRS.2 Maintenance Trainers

PROFESSIONAL  
EXPERIENCE  
(CONTINUED)

**IMACS (UK) Limited**, Worthing **February 1990 – May 1991**  
*Commercial Manager*

- Business Planning and development. Contract negotiation. Facility management including bespoke MIS/IT Systems and Practices.

**Aviation Resources Limited**, West Sussex **March 1989 – February 1990**  
*Technical Director*

- Lear Jet procedures trainer (Aylesbury). Technical staff recruitment and deployment (Broken Arrow)

**British Aerospace Simulation Ltd**, Weybridge **Sept 1988 – March 1989**  
*Chief Project Manager – Civil Aircraft Projects*

- Jetstream J31 and BAe 146 Phase II Full Flight Simulators (Washington)
- Advanced Turboprop (ATP) Phase II FFS (Woodford)
- BAe146 Cockpit Procedures Trainer (Hatfield)
- Business Development within BAe and European Civil Markets
- Technical Consultancy for Reflectone, Inc., during acquisition by BAe (Tampa)

**IMACS (UK) Limited**, Worthing **February 1986 – September 1988**  
**Rediffusion Simulation Ltd**, Crawley **August 1981 – February 1986**

*Project Manager*

- Visual Display Systems in Concorde, B737, B747, A320, BAe Jetstream Full Flight Simulators for BA, Lufthansa, KLM, SIA and British Aerospace
- Boeing B757/767 Maintenance Trainer update (Seattle)
- TWA B767 Flight Test Update (Kansas City)
- JAL B767 FFS installation and JCAB approval (FAA Phase II) in Tokyo

*Systems Design Engineer*

- EICAS systems expert for the Boeing B757/767 Maintenance Trainer update
- Designed and modelled the Autobrakes & Secondary Flight Controls Systems for a DC10-30 Cockpit Procedures Trainer.
- Designed and implemented real-time models of aircraft systems in B737, DC-10, L-1011 and B1-B Full Flight Simulators.
- Languages: FORTRAN77, Assembler, JCL & GENESIS.
- Operating Systems: GOULD-SEL32 RTM & MPX.

**Freelance Sales**, London

*Life Assurance, Telecom and Medical* **October 1980 – August 1981**

**Army** (Royal Electrical and Mechanical Engineers) **April 1976 – October 1980**

*Avionics Technician, Class II*

*Westland Scout, Gazelle, Lynx and DeHavilland Beaver*

**Wilbury Hotel**, Letchworth

*Bar / cellarman*

**October 1975 – April 1976**

**C. Hartley and Sons (China & Glass) Ltd**, Letchworth

*Driver/storeman*

**May 1975 – October 1975**

**Jones Cranes Limited**, Letchworth

*Sales Liaison Officer*

**May 1974 – May 1975**

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