**John James Dyson**

**BEng(Hons) PGDTech(Open) MBCS CITP CEng**

197 Barrack Rd. 🞟 Christchurch, Dorset

07737015182 🞟 john.dyson@dysoft.co.uk

**Software Contractor**

**A Recognised Expert in Software Development and Computer Diagnostics, Experienced in All Aspects of Windows and Embedded Software Engineering**

Analytical software engineer with over 23 years’ experience in programming and software development, consistently delivering strong, sustainable technology gains. An expert in innovative design, development, and delivery of cost-effective, high-performance technology solutions. Demonstrated ability to successfully lead all aspects of full project life cycle development. Driven to improve processes, systems, and methodologies.

**CORE COMPETENCIES**

Embedded Software 🞟 Software Architecture 🞟 System Maintenance 🞟 Customer Relationship Management 🞟 Program Management 🞟 Personnel Training 🞟 Strategy Identification 🞟 Service Delivery 🞟 Project Management 🞟 Issue Resolution 🞟 New & Emerging Technologies 🞟 Agile Methodology 🞟 Client Requirement Identification & Definition 🞟 Team Management 🞟 Solutions Advice 🞟 Cost Reduction Resource Management 🞟 Leadership 🞟 Software Support 🞟 Quality Control 🞟 Safety Critical Systems

**Technical Competencies**

*Compilers:* VC6, VS2005, VS2008, VS2012, Watcom v10.6, Hitex, MPLAB, Wind River, IAR WorkBench 🞟 *RCS:* Mercurial, CVS, PVCS, Clearcase, UNIX SCCS, Dimensions, GitHub 🞟 *Languages:* C,C++*,* C#.Net, Python, HTML, XML, 68K, 8086/88, SQL, ATLAS, Pascal, QBasic, LDRA, Cantata, ADATest, ADA 🞟 *OS:* Windows 2K, XP, Vista, 8, 8, PE, UCos, DOS, Linux, Unix

**EXPERIENCES AND ACHIEVEMENTS**

**Avon Protection, Poole, Dorset 2019 - Present**

**Contracting Software Engineer**

Software development and testing of underwater rebreather to safety related standard EN 14143. Bug Fixes for embedded software within MPLab for PICs. Updates of simulator functionality for Windows in Code Blocks IDE environment for wxWidgets type application. Additional development for Android simulator within Android Studio. Creation of test cases for formal regression testing and release forms. Review and analysis of requirements and design documentation.

* Completion of Software Releases for the U.S. and Norwegian Navy

**Allied Motion, Ferndown, Dorset 2018 - Present**

**Contracting Software Consultant**

Software Analysis of Brushless AC Motor Drives used for truck steering applications adhering to ISO 13849 standard. Review of embedded software architecture and design including CANOpen and J1939 with creation of functional and unit testing. Creation of online requirements and design documentation in Confluence and Jira. TMS570 dual core lockstep processor justification written for Toyota and Scania including elements of IEC 61508 and ISO 26262.

* Completion of System FMEA including software and hardware requirements
* ISO 13849 safety and non-safety requirements completed
* Completed review of software processes to meet safety critical standards
* Creation of Main State Machine in UML using Visual Paradigm Modeler including Unit Testing

**GE Aviation, Cheltenham, Gloucestershire 2017 - 2018**

**Contracting Software Engineer**

Implementation of software change requests for a Communication Remote Interface Unit within the Boeing 777X in C using the Wind River compiler. Software developed for Avionics safety critical systems to DO-178C using DOORS for requirements capture and LDRA for static analysis and unit testing. Creation of Python and Lauterbach scripts to extract results from QorIQ ARM Power Architecture chipset using debugger framework. Production of associated relevant detailed instruction for Timing Extraction and test architecture.

* Successful Completion of Python scripts to perform Module timing analysis.
* Formal Completion of Module timing Analysis Document
* Y-Build project completion containing all customer functionality

**Talley, Romsey, Hampshire 2017**

**Contracting Software Engineer**

Responsibility for software test automation and black box testing a Negative Pressure Wound Therapy (NPWT) embedded application within the medical industry to IEC 62304 Class B. Creation of automated static analysis and white box testing using LDRA to Misra standards. Review and creation of defects and enhancements through Jira in an agile development environment. Review and creation of C code for the PIC32 and PIC16 microprocessor using MPLAB and the creation of automated building using teamcity. Requirements, design and test traceability review for quality standards including FDA necessary for a safety critical system.

* Completion of successful milestone delivery for limited functionality to Molnlyke.

**IBM, Hursley, Hampshire 2016**

**Contracting Software Analyst**

Analysis of open source components and relevant licensing. Review of testing for Analysis tools and creation of test cases.

* Technical Lead on several projects from start to completion.

**EUROSOFT, Bournemouth, Dorset 2007 – 2015**

**Windows Software Products Team Leader • 2009 – 2015**

Oversee all QA+Win and PC builder projects. Design, develop, and maintain computer diagnostic QA+Win for OEMs and PC builder manufacturers and distributors. Manage and distribute project tasks to teams of six; appraise, verify delivery, recruit, mentor, and provide disciplinary action. Create and implement formal software development methods including peer reviews and defect tracking system “bugzilla.” Document and deliver projects to 3rd party contractors. Rewrite and continuously update user manuals. Develop build utilities; introduce multi-language product via dynamic readable XML and PDF files.

* Designed and developed C#.net Amberstone application to facilitate communication using p/invoke marshalling layer.
* Implemented architecture including Windows Diagnostic SDK sold for use on other Windows diagnostic products and used internally for PC builder.
* Created fully automated build system in Agile environment with Parabuild, including automated test descriptions PDF; implemented code and static analysis.
* Created System Abstraction Layer (SAL) within QA+Win to facilitate unit testing.
* Reduced code 35% over three years by reworking system architecture.
* Successfully bid on and closed sale of QA+Win product to Lenovo.

**Senior Software Engineer • 2007 – 2009**

Designed, developed, and maintained computer diagnostic products PC-Check and Zerodata, used by OEMs and computer technicians to test and gather system information on PCs. Maintained EuroDOS, a Eurosoft bespoke operating system.

* Created Boot2Test Product, which provided dual boot environment for EuroDOS and Windows Pre-Installation Environment (PE) and included a GUI for environmental creation.

**NDS, Eastleigh, Hampshire 2001 – 2007**

**Software Tools Engineer • 2005 – 2007**

Utilised Cruise Control and Clearcase in addition to other software tools to create a fully agile continuous integration system designed to improve organisation’s software development efficiency.

* Successfully handed HDI layer for all projects to NDS Korea.
* Implemented new Revision Control System Clearance as part of application restructuring designed to improve global efficiency.
* Integrated static analysis tools with cruise control to improve overall quality.

**HDI Software Engineer • 2001 – 2005**

Integrated and tested 3rd party manufactured cable and satellite set top boxes drivers. Maintained business critical NDS loader that downloaded main application in C. Used Cantata to develop software test cases and full unit testing.

* Used C and bespoke scripting HDI language to develop HDI test software and documentation.
* Created build tools using VC6 for the NDS boot loader application.

**PARKER HANNIFIN, Poole, Dorset 1998 – 2001**

**Microprocessor Development Engineer**

Designed and developed Paragon stepper motor controller product and bootstrap flash program for ST10F168. Created system formal design documentation. Developed bespoke multi-threaded OS for Paragon.

* Used a In Circuit Emulator (ICE) to debug embedded software as part of the Paragon project.
* Collaborated with project teams on digital electronic, electronic drawings, and schematics design and microprocessor peripherals use.

**SERCO, Waterloo, Hampshire 1996 – 1998**

**Software Engineer**

Designed and developed C device drivers, including Pacific Power Supply and Unit Under Test Blower, for Merlin Avionics Test System. Created all forms of formal military documentation requirements, designs, and tests.

* Developed Safety Critical Code for Merlin C Coding standard.

**EDUCATION**

**Pg.Dip,** Computing & Manufacturing, Open University, Online

**BEng(Hons),** Electronic Engineering, Southampton Solent University, Southampton, Hampshire

**BTEC National Diploma,** Engineering, Brockenhurst College, Brockenhurst, Hampshire