Richard John Bowater

✉ solutions@selfsimulate.com   in richardjbowater   🌐 selfsimulate.com   📍 Remote (UK Citizen)

Profile

Senior Software Engineer with a proven track record of delivering tailored, end-to-end software solutions for enterprise teams and ambitious startups, specializing in Windows desktop applications. Architected NHS applications that enable proactive care for PCNs in London and a telemedicine system that was the leading acute care platform for skilled nursing facilities in the US. Expertise in developing end-to-end solutions, building greenfield WPF/.NET applications, and modernizing legacy codebases (e.g., .NET Framework, WinForms, WCF/SOAP, ASP.NET MVC). Adept at unifying UI/UX, data, and infrastructure into cohesive, high-performance products and delivering maintainable solutions that deliver value. Excels at solving deep technical challenges, adapts at speed to new domains, and brings clarity to complexity.

Available immediately for remote contract engagements to architect and deliver high-impact software solutions, preferably with UK-based organizations or internationally collaborative teams. Open to exceptional permanent positions.

Project Highlights

Senior Software Engineer   2017–2024

General Practice Software Solutions (UK)   Healthcare Solutions

Architecting and developing desktop applications that transform complex healthcare data into actionable insights for NHS Primary Care Networks. Built systems managing care coordination and clinical analytics for patients in London.

- **PatientChaseX / PatientInsights (2022–2024):** Built a comprehensive healthcare management system using WPF, .NET 8, and MariaDB that unifies BI and CRM functionalities from legacy applications. Currently serves 23 General Practices across 4 Primary Care Networks in the London Borough of Sutton, managing data for 200k patients. Implemented advanced risk stratification algorithms, intelligent route optimization for clinician home visits, integration with local health services (e.g., pharmacy health checks), GOV.UK Notify integration for patient/practice communications, and geographical analysis tools for population health management. Secured NHS England Automation Grant for centralizing call/recall functions at PCN and borough level.

- **PatientLeaf (2017–2022):** Architected an award-winning clinical analytics platform (John Perry Prize, 2018) for real-time analysis of patient medical records. Developed sophisticated data visualization components providing Bloomberg-style views of medical data. Built complex interactive visualizations combining medication histories, clinical measurements, and patient records with synchronized cross-filtering and timeline exploration. Demonstrated 30% consultation time reduction across NHS practices.

Senior Software Engineer   2017–2018

PODKI (USA)   Kiosk

Led full-stack development and launch of a kiosk platform, featuring a user-friendly WPF-based kiosk application offering print/scan/copy/fax and PC rental services. Integrated payment gateways, QuickBooks for franchise management, and hardware peripherals (printers, scanners, card readers). Developed a custom installer, automated deployment, remote management, cloud-based document conversion, and cloud storage integration. Addressed complex challenges related to document conversion, PDF manipulation, and print optimization.

Senior Software Engineer   2015–2017

TripleCare (USA) (through Veracity Technologies for Trinity Dynamics)   Telemedicine

As the sole Software Engineer, developed TripleCare's telemedicine platform, making key architectural decisions for security and scalability. The system became the leading remote acute care platform for skilled nursing facilities in the United States. Built custom clinician and cart applications, integrating specialized hardware (PTZ camera, multi-channel audio, stethoscope) over VPN infrastructure hosted on AWS. The platform managed 17,000+ complete episodes of acute patient care with an 80% treat-in-place rate, preventing thousands of hospitalizations and saving hundreds of millions in healthcare costs. This success contributed to TripleCare's acquisition by Curavi Health in 2018, expanding to 100 facilities across 14 states and later forming part of Arkos Health ($130M, 2024).

Technical Skills

Core	C# .NET Core, WPF (Advanced Custom Controls), Desktop Application Development, Data Visualization
DB	SQL Server/T-SQL, MySQL/MariaDB, SQLite, Dapper, Entity Framework, AWS RDS
Web	RESTful Services, JavaScript, TypeScript, ASP.NET (MVC, Web API), Azure App Service, WCF
UI/UX	XAML, Avalonia, Telerik UI for WPF, Prism, MVVM
Practices	CI/CD, Git, TDD, Automated Testing (xUnit, FlaUI)
Healthcare	HIPAA Compliance, EHR Integration (EMIS), Telehealth/Telemedicine
Cloud/DevOps	AWS (EC2, S3, RDS), Azure (App Service, VMs, Pipelines), PowerShell, Docker, Linux, GitHub Actions
Other	C, Python, Mathematica, Windows Installer (WiX Toolset), Windows Services
Interests	Blazor, Clojure, MongoDB

Awards & Recognition

- John Perry Prize from BCS Institute (2018) for PatientLeaf's innovation in clinical decision support
- EMIS Partner Program Awards shortlist (2021) for excellence in healthcare IT solutions
- NHS England Automation Grant (2022) to revolutionize patient recall at PCN and borough level

Education

BSc Computer Science with Software Engineering   1998–2001

University of Essex

MPhys Theoretical Physics   2005–2006

Durham University   Incomplete/Deferred