

John Bates- Personal Résumé

Consultant and Developer, Old Gang Consulting, Harrogate.

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Summary of Key Areas of Expertise

I would describe myself as a bespoke software developer with some significant experience in the following areas:

- Database-driven systems and reactive (data-driven) client applications.
- API Servers using typed end-to-end message-based systems.
- Business Intelligence focussed reporting using relational databases and Power BI or R.
- Data manipulation and presentation.
- Windows .NET and Azure, Linux (and other UNIXs), and macOS. TCP/IP Networking.
- Languages: C#, Go, R, TypeScript/JavaScript, and F#.

Recent Large Projects

1. A multi-platform data-cascade application in which relational data in remote nodes is aggregated to a central hub using gRPC for communication between the nodes and the hub. (Go, gRPC)
2. I wrote a quantity and financial position reporting system which presents an interactive, hierarchical view of large quantities of position data. More than 4,000 million rows of data have been processed with some tables containing more than 200 million rows. (C#, .NET, TypeScript)
3. I designed and wrote a commodity trading portal, presenting continuously updated oil prices and foreign exchange rates and charts. (C#, .NET, TypeScript, React, API Server)
4. I re-wrote a housing association PFI performance monitoring system in React, and with a clean API Server component. (C#, .NET, TypeScript, React, API Server)
5. I designed and wrote a toolchain, consisting of an API Server and Power BI connector, that allowed data to be extracted from a housing association operational database and pulled directly into Power BI Desktop or the Power BI cloud service for analysis.
6. I worked towards creating the architecture required to remove dependency on office hardware and operating systems. This moved source code from local Git repositories into Azure DevOps repositories allowing coders to develop, share and deploy code from anywhere.
7. I prototyped, architected, and documented, the processes required to convert existing web sites to run as Azure Web Apps with deployment directly from Azure DevOps. This removed a dependency on cloud-based virtual machines and their associated setup and security overhead.
8. Since 2022 I have provided consultancy services as an independent software consultant.

Before That

- My earliest programming was on 8-bit microprocessors, and in C on the Unix operating system.
- I was involved in software developments for the Plan 9 and Inferno operating systems.
- I co-developed the RSL language which sat behind the Tetra Accounts reporting system.
- I was one of the developers of a successful nationwide electronic auctioneering system.
- I played a role in the development of a multi-user game playing system for BT in 1995.
- I wrote the till component of an EPOS system for a department store.
- I was a proof-reader for the seminal book on the functional programming language, F#.

Education and Early Career

I have a BSc in Mathematics and an MSc in Statistics from Leeds University. My first commercial programming was for a small start-up company in York who were producing software tools for the Unix operating system in the C programming language. I later co-founded a new bespoke software company, Human Computer Interaction Ltd (HCI), on the York University campus. I am now an independent software developer and consultant writing mostly in the C#, Go and R programming languages.