

JEREMY BOWDEN

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PERSONAL PROFILE

With 20 years' experience in Engineering Design I'm able to bring with me a range of transferable skills, for example analytical skills and attention to detail. After enforced redundancy in 2017, due to my employer closing the UK design facility with the loss of all 60 jobs due to moving their design operations to the USA, an interest in computing and programming led me to seek a fresh start in the technology sector, which I find exciting and rewarding.

I am learning with courses that develop all-round coding skills as well as language syntax, which I hope will enable me to find a back-end, full-stack, Quality, or data analysis role where I can apply my zest for problem-solving through code.

ACHIEVEMENTS

- Implemented a full hydraulic pre-delivery inspection specification on refuse collection vehicles. (1999)
- Designed 10 replica vehicle radiators for the aftermarket sales division. (2002)
- I was the lead design engineer for a brand new operator cab for a range of material-handling machines. (2008)
- Led the design of a new engine enclosure assembly for a range of material-handling machines. (2011)
- Learnt and utilised FEA (finite-element analysis) software to help redesign failed components, and optimise the design of new components. (2015)
- I was a senior member of a small team of design engineers that successfully met targets for reducing the number of field failures and customer complaints on a range of machines that were already in production. (2015)

TECH SKILLS

Training

Online training resources including **edX** (*CS50x Introduction to Computer Science* in 2017), **Mozilla Developer Network** (*HTML/CSS* in 2017 and 2018), **Pluralsight** (*C# / .NET Core* in 2018) and **TeamTreehouse** (*Full-Stack JavaScript techdegree* in 2018).

- Algorithms (including sorts and searches), computational complexity, memory management (pointers), structs, the call stack, data structures, web services, APIs.
- C, HTTP, SQLite, Python, Flask, Ajax, RegEx, Scratch.
- HTML5, CSS3, JavaScript, jQuery, AJAX, Node.js, Express, Git, GitHub, templating.
- C#, .NET Core MVC, Unit-testing (with Mocks), Entity Framework Core, Azure.

Projects (refer to the Projects section of my website for a complete list of my projects)

My self-coded website www.jeremybowden.net shows how I've put the HTML, CSS and JavaScript I've learnt into practice.

[Beaver Scout Directory](#) is a C# / .NET web app with a database that stores member's details and allows a registered user to edit their own details. Hosted on the Azure cloud.

A [web scraper](#), which started life as a Node.js command-line tool, but is now a full-stack project using Node.js and the Express framework as a server.

[Anagram Maker](#), a program for creating anagrams from user input, written in C.

A .NET [web API](#) that responds to requests by returning RESTful JSON-format data from the Beaver Scout Directory database.

[Mashup \(a local news web app\)](#) displays news items on a map using back-end Python code and the Flask framework to access Google APIs and an SQLite database, then rendering it in the web browser with front-end JavaScript via AJAX.

[Finance \(a share-trading web app\)](#) uses Python code to create, change, and delete data in an SQLite database and access APIs for real-time share prices, and JavaScript to display it in the web browser.

EXPERIENCE

Sep 2017 - Feb 2018 Contract Design Engineer AxisCades, Enderby, Leicester

- Design of production-line tooling for industrial electric generators
- Draughting 2D drawings of electric generator components

Dec 2005 - Jun 2017 Senior Design Engineer JLG Industries, Leicester

- Finite-Element stress analysis to improve product design
- Dynamic computer-modelling of hydraulic systems to reduce test time and cost, and to predict where failures will occur
- Manage engineering documents in a cloud-based library
- Resolve failures using '*Eight Disciplines*' methodology (8D) by identifying the root cause of failure

Mar 2004 - Dec 2005 Design Engineer Caterpillar UK, Desford

- Design of operator cab components for construction machinery using 3D CAD
- Draughting 2D drawings of components; release and maintenance of documentation

Dec 2000 - Feb 2003 Design Engineer International Radiators, Leicester

- Design of automotive aftermarket radiators using 3D CAD

Nov 1999 - Dec 2000 Design Engineer Dennis-Eagle Ltd, Warwick

- Resolve field failures on refuse-collection vehicles
- Improve quality of production vehicles through better documentation for the production-line operatives

Oct 1996 - Nov 1999 Development Engineer Dunlop Suspensions, Coventry

- Analysis of strain data from vehicle tests to improve product design, reduce design time, and to reduce cost by testing on rigs rather than vehicles
- Plan and perform suspension component tests; compile test reports

Soft Skills

- Self-managing and prioritising my time and workload
- Chairing design reviews, product improvement sessions, new product introduction meetings
- Version control of documentation using cloud-based database
- Coaching colleagues (e.g. product-lifecycle software; CAD software)
- Creating and maintaining business documents (e.g. Bills of Materials; test specifications)
- Working to deadlines (e.g. prototype vehicle builds; design freezes)
- Responsibility of ownership of work (e.g. "cradle to grave" component design)
- Working within global teams across time zones and continents

EDUCATION

BEng(Hons) Automotive Engineering Design, Class 2:2 Coventry University 1992-1996

Mechanical engineering and design; group and individual projects in automotive applications.
Stress analysis, design, materials science, maths, business economics, CAD.

A-levels and GCSEs Burleigh College, Loughborough

A-level Maths/B, Physics/E, Design/E

GCSE Maths/A, Physics/A, Design/A, French/A, Humanities/A, English Language/B,
English Literature/B, Chemistry/C

HOBBIES & INTERESTS

Music (listening, playing, composing), cooking, reading, cycling, pilates, Beaver Scouts leader, family.

REFERENCES

Professional and Personal references are available on request.