

# David Swain, BSc

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An experienced and innovative individual; hard working and willing to put in the extra effort that ensures a quality result. Educated to degree level, experienced in rapid database-driven application development and deployment; a valuable asset for any team.

Led software projects from conception and architecture to release and into ongoing improvement. Implemented systemic improvements in reporting and data structures focussing on detail and accuracy.

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## Career Achievements To Date

### Developer / Product Lead

*JDI / Webzai - July 2015 to present*

- Overhauled reporting structures to improve accuracy and transparency.
- Instrumental in decisions affecting reporting across companies owned by our parent.
- Configured Jira for use by multiple departments with complex needs.
- Improved team's git workflow and practices.
- Oversaw progress of issues and quality assurance.
- Instrumental in adoption of Kanban for workflow management.

### Lead Web Application Developer

*Wildern School - June 2005 to July 2015*

- Created an online school management system upon which staff, students and parents relied.
- Oversaw and implemented schema and code structure changes to accommodate optimisations and new features while preserving existing functionality.
- Analysed and implemented security and permission measures for varied user roles.
- Consulted with management and users to analyse their requirements and decide the project's direction, then worked with the technical team to prioritise, design and implement.
- Managed team performance, set long- and short-term goals, and provided training.
- Interviewed new applicants and took new members through the induction process.

### ICT Technician

*Alexander Hadleigh Wine Merchants - June 2003 to June 2005*

- Developed and maintained the company's database-driven website.
- Improved the consistency, reliability and usefulness of the company's data resources.
- Made key decisions regarding the upgrade / replacement of existing software tools.
- Assimilated and implemented knowledge quickly and effectively in business-critical situations.

### Earlier Work

- Entered data in a time-critical environment as part of a large team.
- Managed a betting shop and staff while taking, settling, and paying customers' bets.

## Hobbies And Interests

I enjoy strategy games and ran an after-school club for chess, go, Warhammer, Risk, and others. Tabletop gaming provides a combination of mental challenge and socialising which I find highly rewarding.

I occasionally carry out freelance work designing and hosting websites, and I like to spend much of the rest of my free time playing computer games or reading sci-fi / fantasy fiction while listening to a wide variety of music.

## Key Technical Skills

<b>Database Development</b>	
<ul style="list-style-type: none"> <li>MySQL</li> <li>Table / relation design and normalisation</li> <li>Stored procedures / functions</li> <li>PostgreSQL</li> <li>MS Access</li> </ul>	<p>Recognised as MySQL expert in the department. Created numerous SQL based systems.</p> <p>Designed, developed and maintained Arc's large relational MySQL database and stored procedures.</p> <p>Developed a detailed product database at AH which linked with and extended their existing Sage inventory database. Using PostgreSQL for a hobby project.</p>
<b>Application Development</b>	
<ul style="list-style-type: none"> <li>PHP</li> <li>OO design patterns</li> <li>Managing / working on large projects</li> <li>xDebug</li> <li>Regular expressions</li> <li>Java</li> </ul>	<p>Involved in design and implementation of dependency injection and provider / adapter based code to serve millions of visitors and hundreds of thousands of customers.</p> <p>Over 9 years of continuous ground-up development creating Arc: a multi-component PHP application. The application was modular with clear abstraction layers and well-defined interfaces.</p> <p>Can visualise and mentally manipulate large blocks of code and thus refactor and debug effectively.</p> <p>Created numerous applications and applets during the 3 years at university to solve a range of problems.</p>
<b>Web Development</b>	
<ul style="list-style-type: none"> <li>HTML / CSS / Javascript</li> <li>Cross-platform compatibility</li> <li>Apache / Nginx</li> </ul>	<p>Jointly created JS libraries to progressively load data to support JSON/AJAX approach to data. Improved responsiveness and reduced transfer of superfluous data.</p>
<b>Systems</b>	
<ul style="list-style-type: none"> <li>(D)VCS admin using SVN / Git</li> <li>Linux server administration</li> <li>Vagrant</li> </ul>	<p>Moved the Arc codebase from SVN to Git. Established adoption of successful branching models at both Wildern and JDI.</p> <p>Set up and maintained several Debian based servers.</p>
<b>General</b>	
<ul style="list-style-type: none"> <li>MS Office, Open Office, Google Docs</li> <li>Adobe Photoshop, GIMP</li> </ul>	<p>A broad knowledge of underlying technologies has enabled rapid acquisition of key skills and abilities.</p> <p>Solved countless issues for friends outside of work.</p>

## Personal Qualities

Precise and logical  
Lateral thinker

Team worker  
Imaginative

Enjoy a challenge

## Education

Institution	Start Date	End Date	Courses Taken	Grade Achieved
University of Sussex	Oct 1998	June 2001	BSc Computer Science with Artificial Intelligence <i>Including 3<sup>rd</sup> year project: "Playing games on a 3D board using artificially intelligent opponents"</i>	2.1
Itchen College	Sept 1996	June 1998	A-Levels: Physics, Computing, Mathematics	B,C,C
Crofton Secondary School	Sept 1991	June 1996	9 GCSEs	A*,A*,A,B, B,C,C,C,D

# Complete Skill Breakdown

## Expert

- PHP - *J,W,A*
- MySQL - *J,W,A*
- Git - *J,W*
- Jira - *J,W*
- Regular Expressions - *J,W,A,U,H*
- Agile / Scrum - *J,W*
- Agile / Kanban - *J*
- Project planning - *J,W,A,U*
- Software engineering - *J,W,U*
- Team leadership - *J,W,U*
- Database design - *J,W,A,U,H*
- Database normalisation - *J,W,A,U,H*
- Object Oriented development - *J,W,A,U,H*

## Skilled

- HTML - *J,W,A*
- CSS - *J,W,A*
- Javascript - *J,W,A*
- Stored procedures - *W*
- Requirements analysis - *W,A*
- Code review - *J,W*
- xDebug - *J*
- Bitbucket - *J*
- Github - *H*
- Vagrant - *J*
- AJAX - *W,H*
- Linux - *J,W,U,H*
- Windows - *A,D*
- Joomla - *W*
- MS Excell - *A,D*
- Open Office - *J,D*
- Documentation - *J,W,U*
- Flow charts - *J,W,U*

## Key

- J* = JDI
- W* = Wildern
- A* = Alexander Hadleigh
- U* = University
- H* = Hobby projects
- D* = Domestic

## Capable

- PostgreSQL - *W,H*
- Java - *H,U*
- SVN - *W*
- PHPUnit - *J*
- Jenkins - *J*
- Apache - *W*
- Nginx - *J*
- Network configuration - *A,D*
- GIMP / Photoshop - *W,A,D*
- VBA - *A*
- MS Access - *A*
- Genetic Algorithms - *U*

## Acquainted

- SASS - *J*
- Grunt - *J*
- PagerDuty - *J*
- Grafana - *J*
- Ruby - *J*
- Amazon AWS - *J*
- Google Compute - *J*
- C++ - *H*
- MS IIS - *A*
- ODBC - *A*
- Sage - *A*
- Bootstrap - *W*
- Balsamiq - *W*