

Anthony Youd

anthony.youd@gmail.com

<http://www.anthonyyoud.co.uk/>

SUMMARY

I am an experienced system administrator and software developer, with particular expertise in Unix/Linux operating systems, database management, and backend website development.

I have ten years experience providing face-to-face specialised IT support to the wide-ranging needs of a large academic department, and experience of developing commercial software.

I work efficiently, to deadlines, equally well as part of a team or individually, and I have excellent communication skills.

IT SKILLS

Software and Website Development

- I am an experienced Python programmer, with knowledge of building, configuring, and maintaining websites using the MVC framework Django. Examples include:
 - A University portal used to track staff and student information. Fully HTML5 and CSS3 compliant, making use of AJAX to provide a responsive user interface. This site was written to interact with an existing legacy MySQL database.
 - A University questionnaire site, used by students to give feedback on courses and degrees, and by staff to review the responses. Backed by a MySQL database, making full use of the referential integrity provided by the InnoDB engine.
 - An editor for the *Numbas* e-learning system. Responsible for initial development as part of a team. See <http://www.ncl.ac.uk/math/numbas/> for more information about *Numbas* and <http://numbas.mathcentre.ac.uk/> for a publicly accessible version of the editor.
 - Several other smaller data-driven websites, using either MySQL or PostgreSQL databases.
- I am also capable of using Python as a scripting tool, where shell tools are not sufficient. Examples include CSV and XML parsing, and SOAP requests.
- In addition to Django, I have built websites with the PHP web frameworks Symfony and CodeIgniter, and I use JavaScript when the situation demands it.
- As a system administrator, I have been responsible for the maintenance and design of several database projects, using MySQL, PostgreSQL, and Firebird (Interbase). Security is always important, and I have a good grounding in authentication and authorisation, and data protection.
- In addition to Python I am currently developing a commercial application in C++, for which extensive unit and regression testing is essential. I use *googletest* and *googlemock* regularly.
- I have extensive knowledge of the Fortran 90 programming language, and a basic working knowledge of Perl.

System Administration

- I have extensive knowledge of both software and hardware aspects of the Linux/Unix and Windows operating systems, within a heterogeneous networked environment, including user management, authentication and authorisation, Apache web server management, and directory services, such as LDAP and Microsoft Active Directory.

- I am familiar with several Linux distributions, and use Ubuntu, Debian, and CentOS on a daily basis. I have configured and maintained servers and workstations running a variety of Linux derivatives, and Windows, and I have some familiarity with configuration of BSD Unix, MacOS, and the Solaris derivatives OpenIndiana and OmniOS.
- As a system administrator I am adept at Unix shell scripting with Bash, C Shell, and Makefiles, Windows batch scripting, and configuration management with software such as Puppet. I also have experience with the configuration of virtualization software, such as VMware and VirtualBox.

Other IT Skills

- With a background in computational mathematics, I also have a strong grounding in writing parallel programs, data visualisation software, such as IDL, and writing publication quality papers and manuals.
- I regularly use version management tools such as CVS, SVN, and git to keep track of source code changes. (I have a github account at <https://github.com/anthonyyoud/> for two open source programs I wrote in Fortran 90.)

OTHER SKILLS

- Knowledge of computational mathematics, fluid dynamics, and numerical analysis.

CURRENT POSITION

- I am a software engineer for Pulsic Ltd, designing and implementing algorithms within the field of Electronic Design Automation (EDA). I develop in C++ and Python.
- I am part of a team working on software for the automatic analog placement and routing of integrated circuits. Day to day work follows the Scrum software development framework and test-driven development practices. Code is backed by an SVN and git server, and continuous integration is implemented with Jenkins and buildbot to maintain code quality.

PREVIOUS POSITION

I was the Teaching Support Officer/Computing Officer in the School of Mathematics & Statistics at Newcastle University.

- Responsible for Unix and Windows system administration: general IT support, setup, installation, configuration, and maintenance of Windows and Linux workstations and servers, including integration of Unix systems into a Microsoft Active Directory infrastructure.
- Responsible for the School's e-assessment systems, authoring questions of a mathematical nature, maintaining the backend databases, and providing support and advice to students and staff.
- Development of numerous internal web sites, conference and workshop websites, and the School admissions database.
- Contribution to teaching programmes by preparing materials and leading practical classes, and supervision of Masters level project students.
- Providing support, advice, and training materials for undergraduate and postgraduate students and staff, in the use of mathematical and statistical software, and other software for scientific writing and presentation.

EDUCATION

- 2002–2005 Ph.D.
Bifurcations in forced Taylor–Couette flow, Newcastle University.
- 1998–2002 MMath.
First class. *A new bifurcation in Taylor vortex flow*, Newcastle University.
- 1996–1998 A-Level
Mathematics (B), Chemistry (B), French (C), General Studies (B).
St. Edmund Campion R.C. School, Gateshead (now Cardinal Hume R.C. School).

EMPLOYMENT

Mar. 2014–present **Software Engineer**
Pulsic Ltd.

Jan. 2010–Mar. 2014 **Teaching Support Officer**
School of Mathematics & Statistics, Newcastle University, NE1 7RU.

Jan. 2007–Jan. 2010 **Assistant Computing Officer**
School of Mathematics & Statistics, Newcastle University, NE1 7RU.

Mar. 2006–Jan. 2007 **Post-doctoral Research Associate**
Department of Applied Mathematics & Theoretical Physics, University of Cambridge, CB3 0WA.

Oct. 2005–Mar. 2006 **Assistant Computing Officer**
School of Mathematics & Statistics, Newcastle University, NE1 7RU.

REFERENCES

Available on request.