Helen Cousins

Personal Data

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Languages

Matlab
Extensive experience of using Matlab for GUI design, data display and data analysis. Including heavy use of the Statistics toolbox.

C, Bash
I have done some work in C, which is called from Matlab, to control National Instruments hardware and store the collected data in a custom compressed format. I have used Bash to run segments of data analysis on multiple computers

Java, Python, Fortran, Perl, Basic, LaTeX, HTML, XML, MySQL
Academic and hobbyist use, beginning in Basic in 1990. My latest project in Python and MySQL is available at http://www.chiark.greenend.org.uk/ucgi/ naath/birthday.py

Transferable Skills

Technical Communication
In my current work I regularly discuss complex technical and scientific issues and requirements with my co-workers whose technical skills range from basic to extensive and for whom English is not always a first language. Such discussions occur both in writing and in person.

Testing
Testing in my current work is collaborative, but mostly my responsibility. Every addition to the project needs to be tested carefully to ensure both that it functions properly with a wide variety of inputs and that previous functionality has not been damaged.

Employment

2006 to present	**Computer Associate at PDN, Cambridge**
	Sole developer and primary tester of experimental data collection, display and analysis software in Matlab for Professor Schultz and group at Anatomy.
	Work requires development, documentation, and testing of the user interface, data recording with specialised hardware, graphical display of complex data, and statistical analysis requiring keeping up with best practice in the field. Translating (from Fortran) and building on previous work by others.
	Development is user driven; meeting the complex needs of multiple users, often simultaneously to short deadlines. Detailed communication of rapidly changing requirements is required with users who are neuroscience rather than IT specialists. User requirements include deploying new statistical tools, arranging the data in different ways before display, and alterations to the user interface.

Education

2007 to 2013	**Open University** BSc in Computing and Mathematical Sciences (2i)
	Focussing on Java development and pure mathematics.
2002 to 2006	**Newnham College, Cambridge** MA/MSci, Natural Sciences (2ii)
	Focussing on physics with a substantial mathematical content.
	4th year project with David MacKay on inference and machine learning.
1995 to 2002	**Chelmsford County High School for Girls**
	A levels in Maths, Further Maths, Physics, and Chemistry all grade A.

Other Interests

I take part in Kentwell Halls annual recreation of Tudor Life, a project aimed at educating school children and the general public about life in Tudor England. This has given me strong experience of communicating with a wide range of people on a diverse range of subjects; it has also given me the opportunity to organise and manage small projects within the recreation environment.