Sean Marshallsay

Education

2012 - 2016	**MPhys Experimental Physics, University of York**
	Year long experiments and dissertation focussed on testing for ferroelectricity and magnetoelectricity in various samples.
	Worked in various teams of 2-5 to design, perform and present results from several four week experiments.
	Learnt how to use various pieces of scientific software, including LabVIEW and Python with the SciPy stack.
	Undertaken courses in High Performance Computing in C, including OpenMP- and MPI-style parallelism.
	Strong focus on Semiconductor Physics and Magnetic Materials.
	Undertaken courses in both analogue and digital electronics and have used analogue electronics extensively in laboratory sessions.
	Fostered strong critical thinking and procedural skills through ongoing and open-ended laboratory experiments.
	Experience in collecting, analysing and interpreting data.
	Experience presenting results and other information through both presentations and formal reports.
	Learnt how to solve problems independently and built a strong independent work ethic.
2010 - 2012 A-Levels AS-Levels	**Hardenhuish Academy Sixth Form** Maths, Further Maths, Physics (A*, A, A) Critical Thinking, Chemistry (A, B)
2008 - 2010 10 GCSEs	**The John Bentley School** Grades A*-A including Maths, Science, English and French

Technical Skills

Proficient with spreadsheet and word processing software; including Microsoft Office, OriginLab and LaTeX.

Highly competent with with scientific programming in Python and the SciPy stack, as well as some experience with the Julia language and Gadfly.

Experience interfacing with databases from Python and Julia, including being the co-maintainer for SQLite.jl.

Knowledge of OpenMP- and MPI-style parallelism in C, and courses in optimising high performance C and Fortran code.

Experience with systems programming in Rust, being the sole maintainer of the mildly popular rusty-cheddar crate.

Familiarity with Unix operating systems, along with Bash and similar shells.

Experience using SSH to run programs on a cluster computer.

See more at https://github.com/Sean1708.

Work Experience

JUL 2015 -	**Research Assistant, Condensed Matter Physics, University of York**

SEP 2015	Designed and developed a device for testing ferroelectricity and magnetoelectricity in crystal samples. Designed and implemented a user interface for the device using LabVIEW. Became proficient at picking key information out from technical documents. Worked with high voltage and high sensitivity electronic components. Learnt how to draw complex circuit diagrams and other technical drawings. Trained in lab safety.
JUL 2014 - **SEP 2014**	**Office Assistant, New World Foods Ltd.** Worked in a small office providing support for various aspects of the business. Used Microsoft Excel extensively as simple database for work orders and sales orders. Responsible for tracking and analysing line efficiency and net product made/delivered. Provided simple automation and ensured consistency using VBA Macros.
MAR 2014 - **APR 2014**	**Data Administrator, Stroud Resourcing** Responsible for migrating a database from one applicant tracking system to another. Quickly became familiar with two entirely new pieces of software. Acted as a liaison between two external companies. Wrote and delivered a short introductory course on using the new software. In charge of ensuring that vacancy advertising was kept up to date. Ensured excellent customer service was delivered when contacting candidates or answering phones.
JAN 2014 - **APR 2014**	**Physics and Maths Tutor, mytutorweb.co.uk** Designed and delivered one to one lessons. Gained experience building professional relationships. Developed strong communication skills.
AUG 2012	**Data Analyst, Artesia Consulting Ltd.** Collated and formatted weather data for use in statistical modelling. Performed preliminary research and analysis.
JUL 2011	**Process Instruction Writing, IXYS UK Westcode Ltd.** Worked within a small team to develop the documents used in training operators. Performed wafer and device processing within a clean room environment. Liaised with various departments to ensure accuracy in instructions.

Other Experience

JUN 2014 - **JUN 2015**	**President, University of York Karate Club** Developing leadership and teamwork skills by interacting with the committee. Often teach sessions at the club and help others expand teaching skills. Teaching the club helps build patience and clarity of expression. Performed role of Vice-President, Jun 2013 - Jun 2014.
SEP 2013 - **OCT 2013**	**Second & Third Year Contact, Alcuin College** Responsible for 12 first year students during the first two weeks of the academic year. Greatly improved interpersonal skills.