

# Will Pearson

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I am a student at Sheffield University, in my fourth year studying for an **MEng in Structural Engineering with Architecture**. I have a great interest in the **use and application of computing in the area of structural engineering** and am constantly looking to develop my knowledge of software and programming alongside my regular studies.

Last year I undertook my dissertation module on the subject of Structural Layout Optimisation; I investigated the scope and limitations of a program written by my dissertation tutor. This involved learning some C++ in order to modify the program and also gave me the opportunity to use the University's High Performance Computer Cluster (Iceberg).

## Degree Modules

Over the last three years of my MEng degree my studies have included the following:

- structural mechanics and analysis (elastic and plastic, static and dynamic)
- engineering mathematics
- geotechnics
- engineering design, including drawing and surveying
- structural design projects (group and individual)
- bridge engineering
- architecture modules (lectures and studio)

My final year modules include F.E. modelling, fracture mechanics and further group design projects.

## Education

<i>2008 - present</i>	University of Sheffield	Working towards a 2:1. (Due to graduate in 2012.)
<i>2006 - 2008</i>	Beechen Cliff Sixth Form, Bath	A Level: Maths (A); Physics (B); Art (A). AS level: Computing (A)
<i>2001 - 2006</i>	Beechen Cliff School, Bath	GCSE: 11 A–C grades

## Employment

### *Research Assistant – Summer 2011*

*Computational Mechanics and Design (CMD) Research Group, Department of Civil and Structural Engineering, University of Sheffield*

This position included formatting research papers for submission (using the L<sup>A</sup>T<sub>E</sub>X typesetting language) as well as drawing figures and graphs (using the Asymptote language) to be included within. I also had the chance to get involved with some of the research happening in the department including building and processing data from Finite Element models (using LS-DYNA/LS-PrePost) and writing documentation in a wiki format.

During this time my ability to adapt quickly to these new software tools was thoroughly tested. I also learnt about time management and how team members, such as those in the CMD group, work collaboratively using version control systems such as Subversion. The skills I developed in formatting have since been transferred back to my studies when I took responsibility for the compilation and presentation of a feasibility report for a recent group project; My group went on to "win" the bid.

### *Assistant (part-time) – Nov 2006 - Sept 2008, July - Sept 2009*

*W. M. Morrisons, Bath*

## Industry Experience

<i>Summer 2011</i>	Research Assistant (Dept. of Civil & Struct. Eng., University of Sheffield)
<i>19th August 2010</i>	Bath Riverside Development meetings (Buro Happold, Bath office)
<i>18th August 2010</i>	London 2012 Team Stadium design office inc. site visit (Buro Happold)
<i>May 2008</i>	Site visit to St. David's 2 Development, Cardiff (Whitbybird)
<i>June 2007</i>	3 day intro placement (Buro Happold, Bath Office)

My work experience to date has been very valuable in helping with the important decisions concerning my education as a structural engineer.

## Key Achievements

- “Winning” bid in several group design/feasibility projects
- Duke of Edinburgh Silver Award
- Duke of Edinburgh Gold Award (Expedition only)

## Key Skills

### *Technical Skills*

<i>Software</i>	<i>Formatting</i>	<i>Programming</i>
<ul style="list-style-type: none"><li>• AutoCAD</li><li>• Ansys (APDL)</li><li>• LimitState</li></ul>	<ul style="list-style-type: none"><li>• L<sup>A</sup>T<sub>E</sub>X</li><li>• Asymptote</li><li>• Adobe Suite (CS4)</li></ul>	<ul style="list-style-type: none"><li>• MATLAB</li><li>• Linux/Mac OS X CLI</li><li>• Subversion/Git</li></ul>

I am also in the process of learning C++ and have experience of compiling and debugging C/C++ on Linux (CLI) and Mac OS X (Xcode). I feel that I have an **aptitude** for learning new software packages and programming languages. I am constantly developing my knowledge on an ad-hoc basis, for example through the use of software under development from the community repositories in Linux.

### *Personal Skills and Interests*

<i>Practical</i>	I constantly challenge myself with personal projects. I have built and maintained my own bikes and, more recently, refurbished an old PC in order to learn linux. I have enjoyed researching the required skills to complete these tasks.
<i>Active</i>	I play ice hockey for the University of Sheffield, a sport which demands a high level of team work and physical commitment on and off the ice. This year I have been involved in the running of the club in both the executive committee and the coaching committee.
<i>Independent</i>	<p>In 2008 I completed the expedition part of my Duke of Edinburgh Gold Award – a four day hike through the Massif Central of France, starting in the ski resort of Le Mont-Dore and finishing at Volvic.</p> <p>I have a full UK driving licence, with no endorsements.</p>

## References

References are available on request